JULY
1952

fueloil & oil heat

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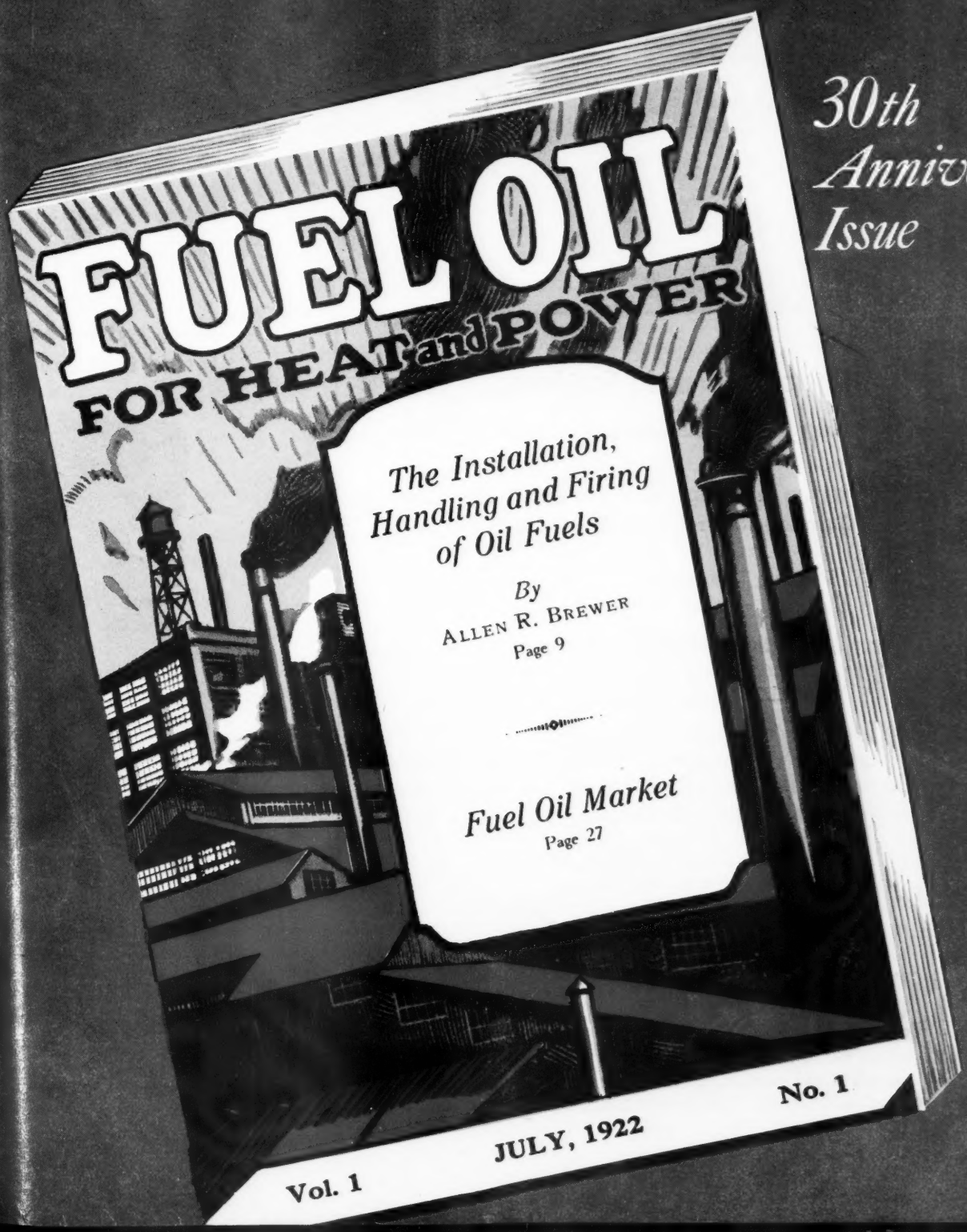
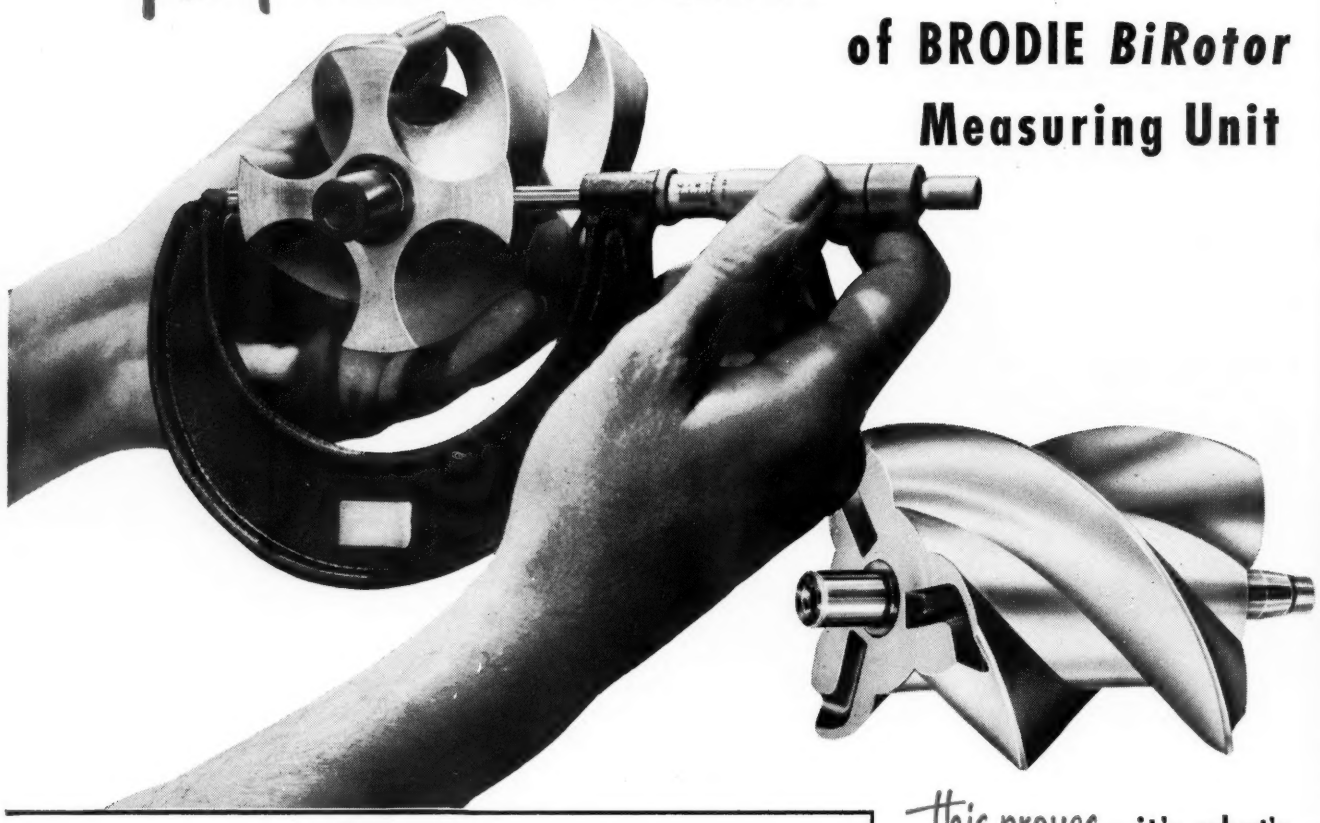
30th Anniversary Issue



No Measurable Wear —

of BRODIE *BiRotor* Measuring Unit



this proves – **it's what's inside that counts**

–after Millions of Gallons in Continuous Service

- After 500 hours of continuous operational tests--*without a shutdown*—
  - —at maximum rated capacity of 300 gallons per minute
  - —handling a total of 9 million gallons of high test gasoline
  - —*Brodie BiRotor Meters showed no measurable signs of wear.*
- In countless installations Brodie BiRotor users report even greater records of service and performance—conclusive evidence of the unfailing dependability of Brodie BiRotor Meters.
- Investigate today the features of Brodie BiRotor Meters that add up to long trouble-free service and low maintenance costs. Write for full details.

BRODIE ALL-STEEL BiRotor TRUE ROTARY METERS

RALPH N. BRODIE CO., INC. • ALVARADO & WEST 137th AVE., SAN LEANDRO, CALIFORNIA, U. S. A.

Division Offices: 550 SO. COLUMBUS AVE., MT. VERNON, N. Y. • 59 E. VAN BUREN, CHICAGO 5, ILL. • 167 PARKHOUSE STREET, DALLAS, TEXAS
221 9th AVE. N., SEATTLE 9, WASH. • 5401 E. SHEILA STREET, LOS ANGELES 22, CALIF. • *REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES*

JULY fueloil & oilheat 1952

VOLUME 11 NUMBER 7

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ENTERED AS SECOND CLASS MATTER AT THE POST OFFICE AT BALTIMORE, MD.

LEOD D. BECKER, *Chairman, Board of Directors*
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Lee Steedle, Assistant Advertising Manager
Mid-West Manager: Harold J. Hannigan
549 W. Washington Blvd., Chicago 6 Phone: Financial 6-3221
Pacific Coast Representative: Don Harway
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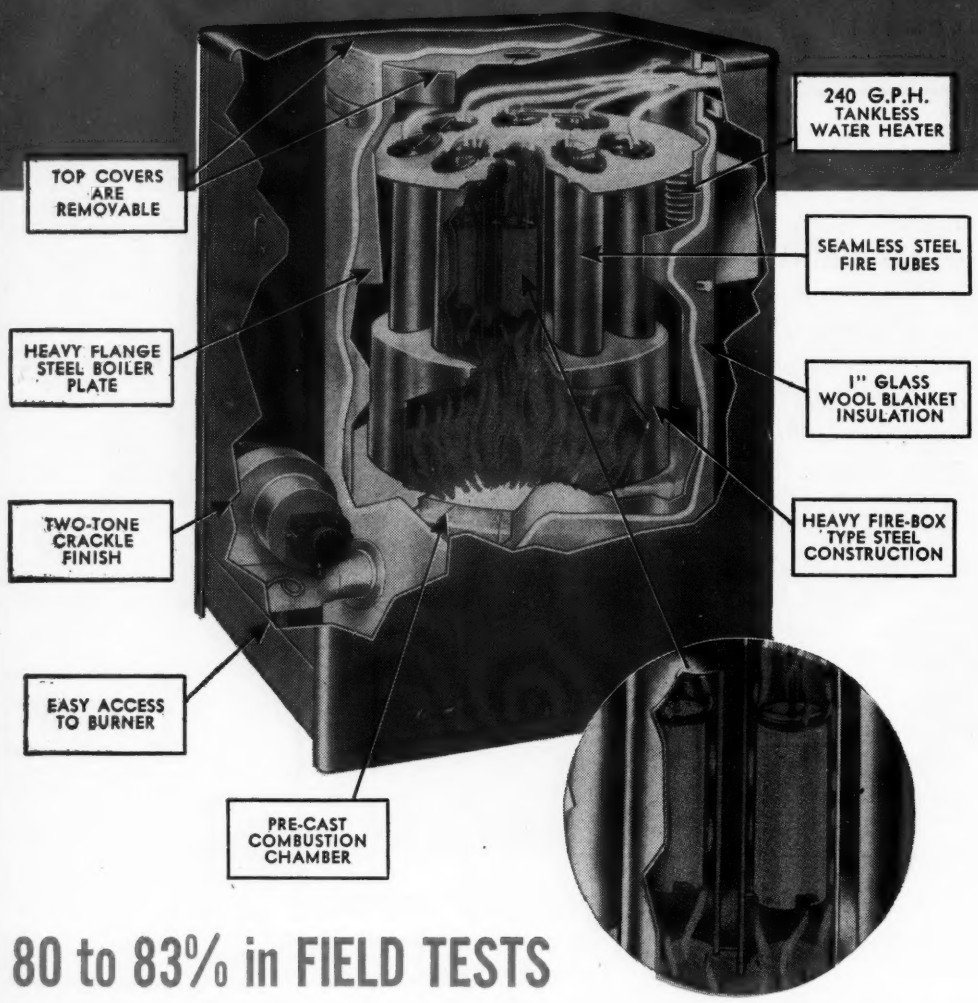
Among other things . . .

Observation of this, our 30th Anniversary Issue begins on page 10, appropriately enough, with a guest editorial contributed by Leod D. Becker, founder of the original "FUEL OIL" in 1922.

In succession then, the first three articles call to mind "Oilheating Activities in 1922" with excerpts and comments from the initial issues; "Reminiscences" from some of the pioneers still active in the industry today; descriptions and photographs of a representative group of "old time" oilburners.

For those fueloil distributors who want to improve their management policies based on a knowledge of what it costs to do business, Ragle's article—beginning on page 64 and the conclusion of a six-part series—will be of practical, profitable interest.

Higher Boiler Efficiency!

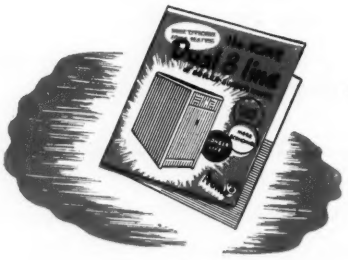

TOP COVERS ARE REMOVABLE
240 G.P.H. TANKLESS WATER HEATER
SEAMLESS STEEL FIRE TUBES
HEAVY FLANGE STEEL BOILER PLATE
1" GLASS WOOL BLANKET INSULATION
TWO-TONE CRACKLE FINISH
HEAVY FIRE-BOX TYPE STEEL CONSTRUCTION
EASY ACCESS TO BURNER
PRE-CAST COMBUSTION CHAMBER

80 to 83% in FIELD TESTS

*Patented stainless steel intensifier tubes exclusive with Acme, make the difference. They cut chimney heat loss; speed heat transfer from combustion chamber to boiler. Homeowners get faster heat and real fuel saving — two advantages that pay off for more winters, because every Acme Dual 8 is A.S.M.E. Code Constructed of heavy welded steel. Its rated capacity is certified by the National Association of H. P. & A. C. Contractors. Result: contagious customer satisfaction . . . and more sales for you.

Acme Dual 8 is easy to install and service: the cabinet can be installed after all piping has been completed; all controls are on the front of the boiler; the intensifier tubes are readily accessible.

STAINLESS STEEL INTENSIFIER TUBES



Write for the new folder illustrating the complete Acme line of boiler-burner units: Acme Heating Division, 1033 New Britain Ave., West Hartford, Conn.

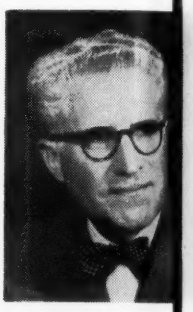
*U.S. PAT. No. 2,560,275

Acme DUAL 8 High Efficiency BOILER-BURNER UNITS

ACME HEATING DIVISION • THE UNITED TOOL & DIE CO.

Names in the News

William A. Matheson has bee named president and general manage Portable Elevator Mfg. Co., Bloomington, Ill. Matheson began his career with a distributing organization in Seattle, Portland and Tacoma. From 1936 to 1940, he was eastern division manager, Genera Motors' Delco Appliance Div. In 194 Matheson joined Williams Oil-O Matic as general manager and late became president of that firm. Upo consolidation of the Eureka and Wi liams Corporations, Matheson becam the executive vice-president in charg of all operations in the Williams div sion. Matheson left Eureka-William Corp. to open his own offices as a mar keting consultant. More recently, h served as vice-president of the Amer can Bildrok Corp. In addition to hi business activities, Matheson has serve as president Oil Heat Institute, lec tured on sales and economics and wrot a best selling book, "The Selling Man.



G. T. (Ted) Kaufman has bee appointed manager, engineering serv ice, of the new Petro Heating and Power Equipment Division, Iron Fireman Mfg. Co., Cleveland, O. For the last seven years, Kaufman has been technical secretary of Oil Heat Institute o America. Prior to joining OHI i 1945, he spent 23 years with the Pe

One of the Greatest Ad Campaigns in the Heating Industry—

One of the Most Complete Lines in the Heating Industry—

help you PROFIT with fluid heat

AUTOMATIC HEATING EQUIPMENT

OVER 7,500,000 POTENTIAL CUSTOMERS SEE THESE ADS EVERY MONTH!

SMASHING, COLORFUL ADVERTISEMENTS month after month in *Saturday Evening Post* and *Better Homes & Gardens!* Ads aimed at *your* customers . . . homeowners . . . prospective homeowners . . . people with money in their pockets and heating on their minds! Ads that tell readers to visit *you* for the best heating equipment money can buy! Ads with just one purpose—to *help you sell!*

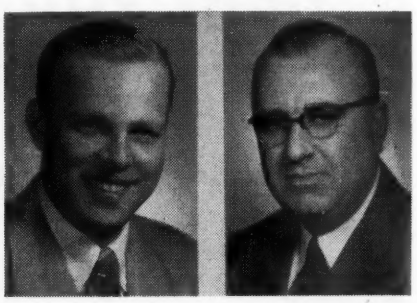
And remember, you're selling one of the most complete oil and gas fired lines in the heating industry! A complete line of Warm Air Furnaces, Boilers and Conversion Burners . . . all backed by over 30 years of Fluid Heat research and engineering know-how! Automatic heating equipment that fits every home heating need and gives amazingly trouble-free service, remarkable efficiency, and long life.

That's the sensational profit campaign Fluid Heat has for you in '52! Be sure *you* cash in by showing and pushing Fluid Heat! If you're not already selling this high-profit, top-quality line, write us for details. Address: FLUID HEAT DIV., Anchor Post Products, Inc., 6900 Eastern Ave., Baltimore 24, Md.

"WORLD'S ECONOMY CHAMPION"

OIL FIRED UNITS
GAS FIRED UNITS
Famous Fluid Heat Pressure Burners. Four models, with firing rates from 7/10 to 12 gallons per hour.
Famous Fluid Heat Coiler Burner Units. Six models, rated from 300 to 1090 sq. ft. of standing steam.
New Fluid Heat Gas Fired Warm Air Furnaces with rated inputs of 75,000 to 150,000 B.T.U. per hour.
Famous Fluid Heat Warm Air Furnaces. Seven models, from 70,000 to 200,000 B.T.U. per hour.
Single-part, self-piloting Fluid Heat Gas Conversion Burners. Rated inputs of 75,000 to 300,000 B.T.U. per hour.
Famous Fluid Heat Wall Flame Rotary Burner. Two models with firing rates from ½ to 4½ gallons per hour.

troleum Heat & Power Co. After a period as installation and service manager in their Boston and Mineola, L. I., branches, he served successively as field engineer, supervisor of field engineers, and finally as Petro national sales engineer.

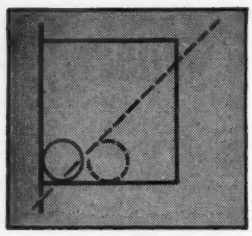


Lattner Moellering

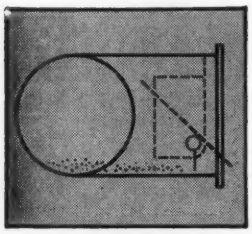
B. J. Lattner has been elected executive vice-president and general manager, Century Engineering Corp., Cedar Rapids, Ia. He formerly was vice-president and heating sales manager. *W. S. Moellering* has been named to succeed Lattner as heating sales manager.

W. C. Barrett, eastern area field sales manager, Williams Oil-O-Matic Div., Eurèka Williams Corp., Bloomington, Ill., died suddenly June 12 of a heart attack in New York's Grand Central Station. Barrett recently had been appointed to his position after serving as Oil-O-Matic's special representative for unit sales in the division's eastern area. He earlier was field sales representative in Connecticut and western Massachusetts. Barrett joined Oil-O-Matic in September 1949. Surviving are his wife and three children.

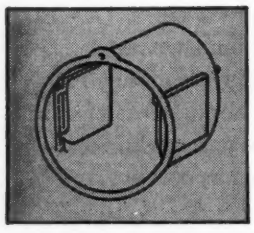
Robert J. Lucas has been elected by the board of directors, Cleveland Steel Products Corp., Cleveland 2, O., to the post of vice-president. He will be in charge of the company's Toridheet Division. Lucas has been with Cleveland Steel for seven years. Previously, he was associated with the Ferbert Schorndorfer Co., also of Cleveland.



ROLLING TYPE HINGE PIN means no friction, no binding, no need for oiling, no fear of corrosion. Off-Center Gate Mounting lets draft operate on a greater effective area.

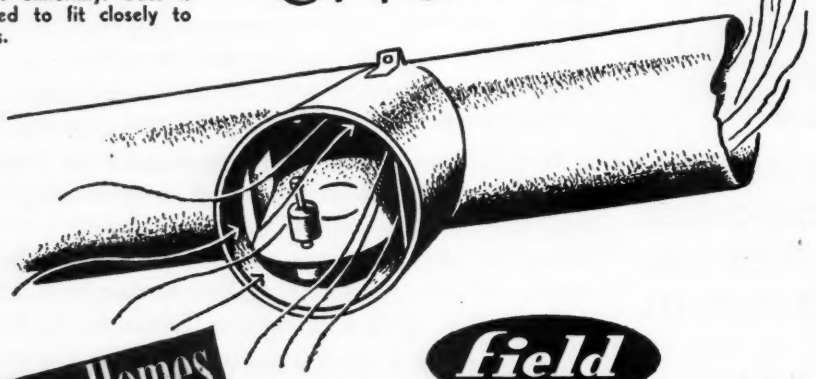


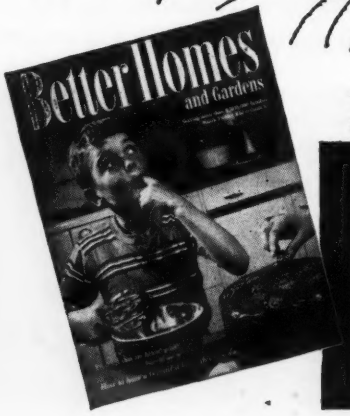
EXTENDED HOUSING places gate well outside the flow of fouling soot and gases. Warping or binding of gate are eliminated assuring full sensitivity.



SIDE WINGS mean greater accuracy as they allow the area of the opening through the control to increase uniformly. Gate is shaped to fit closely to wings.

don't send a boy on a man's errand





field

The Draft Control that's nationally advertised in BETTER HOMES & GARDENS

field CONTROL DIVISION

H. D. CONKEY & CO., MENDOTA, ILL.

AFFILIATES:

CONCO BUILDING PRODUCTS, INC.
BRICK • TILE • STONE
CONCO MATERIALS HANDLING Div.
CRANES • HOISTS

LOW COST, DEPENDABLE HEATING
IS NO PROBLEM WHEN YOU SELL THE

Monogram

OIL WALL FURNACE

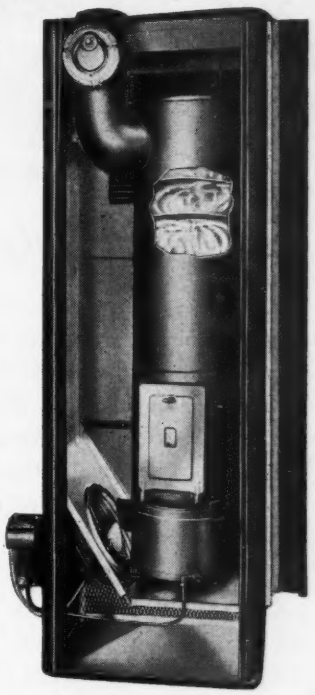
The tremendous small homes market is a lucrative one for heating contractors. It can be made even more so by the proper selection and promotion or a well designed, efficient heating unit, and we're sure we have the answer in the new MONOGRAM Oil Wall Furnace.

The MONOGRAM is a modern, packaged unit which allows YOU to economize on installation time, and your customer on space. No more bulky, unsightly heating plants for him . . . just a handsome, compact unit that extends only 3½" into his living room.

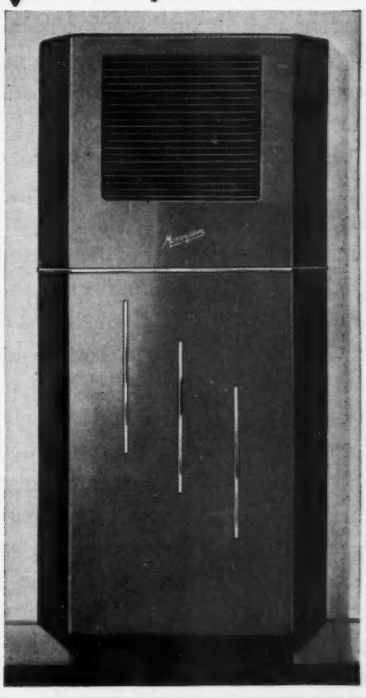
With the MONOGRAM you can offer your prospects a complete furnace installation at space heater prices because there's no need for duct work and since it is listed by the UL, an inexpensive pre-fab chimney may be used.

You just can't beat a deal like this . . . besides, it's powered by the exclusive MONOGRAM burner rated at 65,000 btu which has been in use since 1937. Better write us today for more details.

The "inside" story will suit you . . .



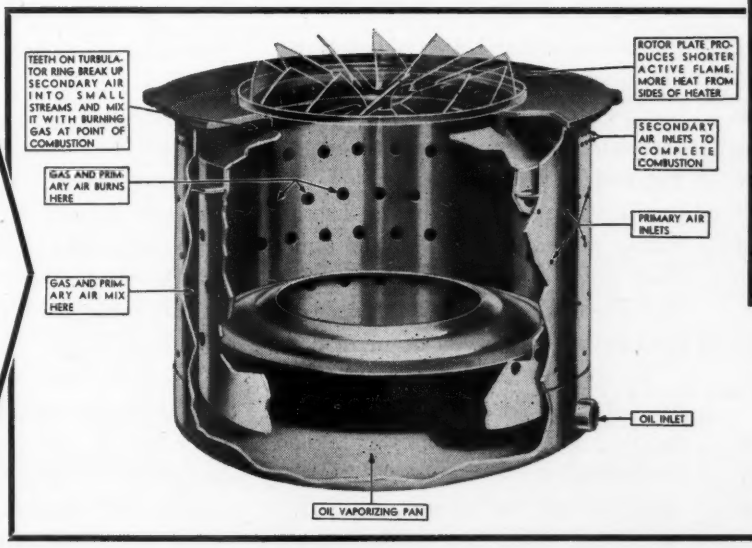
. . . and the outside will suit your customers!



THIS IS THE ANSWER.

THE POWER-AIR BURNER

THAT PRODUCES MORE HEAT AT LESS COST


TEETH ON TURBULATOR RING BREAK UP SECONDARY AIR INTO SMALL STREAMS AND MIX IT WITH BURNING GAS AT POINT OF COMBUSTION
GAS AND PRIMARY AIR BURNS HERE
GAS AND PRIMARY AIR MIX HERE
ROTOR PLATE PRODUCES SHORTER ACTIVE FLAME. MORE HEAT FROM SIDES OF HEATER
SECONDARY AIR INLETS TO COMPLETE COMBUSTION
PRIMARY AIR INLETS
OIL INLET
OIL VAPORIZING PAN

WRITE TODAY

•

QUINCY STOVE MANUFACTURING COMPANY

QUINCY, ILLINOIS

fueloil & oilheat

Editorial Leaks

Because of the special nature of the issue we have a guest editorial writer this month. He is Leod D. Becker, founder in 1922 of FUELOIL FOR HEAT & POWER *which became* FUELOIL & OIL HEAT *in its 20th year. Becker retired from active work with the magazine in 1942 and has since lived at his farm, Alfalfa Hill, Milford, N. J.*

ON THIS 30TH ANNIVERSARY of FUELOIL & OIL HEAT I want first to express my gratitude for the reader interest and loyalty which has made its growth possible. It has been a great experience to grow with these readers and with this industry.

One advantage of living at Alfalfa Hill is that anniversaries like the 25th Silver Anniversary of the Oil Heat Institute in '48, and this 30th birthday of my favorite magazine serve to remind me that a quarter or a third of a century is not long. It just seems long.

Our history is brief. It is, I'm told, tiresome to hear this said too often. Yet we are a young industry and a young magazine. The next twenty to thirty years may be less adventurous but they will be better ones I'm sure.

Reading the July 1922 issue the other day, reminded me that the first text page of the first issue is a letter of good wishes from L. V. Nicholas. Then president of the National Petroleum Marketers Assn., Chicago, he had pioneered as an oil and oilburner distributor in the Mid-west.

Now, a semi-retired consultant, he lives at Ottawa, a pleasant small town on the banks of the Marias des Cygne River, in eastern Kansas. It is where Robert Gray, our present editor, grew up. It is, also, my birthplace. Try not to let that prejudice you against the elm-shaded town.

What Nicholas wrote in '22 and agreed last summer at Alfalfa Hill still held was: "Your idea is one of mutual helpfulness. Every buyer of fuel that you turn to fueloil as a source of heat or power, as soon as the new fuel is given a fair test, becomes a satisfied customer of some refiner or marketer of oil. Satisfied customers are the foundation stone of any industry."

On the second text page of that July '22 issue, I reread our baptismal editorial. It says the magazine "is dedicated to a two fold aim: first, the furthering of the intelligent use of fuel-oils; second, broadening the efficient use of fueloil. But the magazine is dedicated in another—and higher—sense to its readers. It will stand or fall as it serves you. Send to it suggestions for improvement. Submit to it your oil-burning problems. Make it as much a part of your organization as your boiler room."

That was written by a youngster in his mid-twenties, who writes this. He thinks it is still sound gospel.

The main ideas back of the first issue are the policies on which each issue is based today.

After 30 years even a memory that is sometimes expected to be all-inclusive gets a little shop worn. In this random record I mean to tell briefly of the work and problems in human relations during the first two years of the magazine, as I recall them.

Thirty Years in Retrospect

The surprising thing is how little they've changed in 30 years. The work is more hurried in New York than in Galesburg. The organization is bigger. Yet both the work of planning and producing an issue and the problems in human relations are about the same. They differ only in detail or for the day. The reader's problems are still the mainspring that keeps us in motion.

We spent those first two years on the top floor of Galesburg's tallest office building. It was five stories high. The printing plant was one block from the office. We are now on one of the lower floors, the 11th, of a Fifth Avenue building, sometimes called the Book of Knowledge Bldg. Though it seems a good work place, I'm told of occasional gripes over light, air and office layout. We had those in Galesburg, too.

Our printing plant is much larger now, as is the magazine. But it's about 200 miles from the main office. We can no longer walk over to the printing plant, have a cup of coffee or a coke en route, and be back at our desk in 30 minutes. It takes about 12 hours to make the round trip now—without stops for refreshments.

L. D. Becker

Arthur Winkler, now advertising manager of our company, then a green cadet fresh from the Missouri School of Journalism, used to have trouble getting his copy written because the clear morning light from the large west windows at his elbow, hurt his eyes, he said.

Work in the "Early Days"

He and I both remember one of our young stenographers, who lived over a bakery and always smelled strongly of fresh flour. She quit us because, she announced, she was sure reading price tables set in six point type could only end in her wearing glasses. She was a country girl who'd come to town to take a business college course, find a job and a husband. She was determined to find a man. She left us when she was certain she'd soon have to wear glasses. "Men seldom make passes at girls who wear glasses," she said, as she bade me goodbye.

This is as good a place as I am apt to find to permanently scotch a story long current about Art Winkler. It has been told in many versions and impressions vary. The indisputable fact is that he lived at the local Y.M.C.A. the late summer of '23 when he joined our organization.

His desk faced mine in the office and he liked to talk about what a fine place his "Y" home was. They had a fine group of young men there and a handsome lounge or lobby, where the young men mostly entertained themselves, he told me.

Coming back from a late lunch one workday afternoon and walking past the "Y," I decided to stop in and see

Now is the time for "LC" ACTION!

- To get 100% contract renewal among present oil-customers.
- To convert "call in" customers to "keep full" service.
- To win new customers from competition (whatever type) through better service.
- To cut back mounting delivery costs.

What is "LC" ACTION?

"LC" is the model of VENTALARM Whistling Tank Fill Signal which allows quick installation in vent pipes of tanks that are already in use. Easy to do because "LC" incorporates a compression fitting in its top (no threading). "LC" ACTION simply stands for the following moves on your part.

1. Installing "LC" VENTALARM Signals on *all* old-customer tanks . . . those you now serve.
2. Offering Model "LC" to other householders in your territory who have yet to know the cleanliness and convenience of VENTALARM Signal fuel oil delivery.

This is how "LC" ACTION pays off—

for Your Customers —

1. Eliminates damaging spills.
2. Prevents tank "weeping" and resultant oil odors.
3. Eliminates run-outs.
4. Makes oil delivery truly automatic.
5. Maintains the privacy of the home.

for YOU —

1. Eliminates customer delivery complaints.
2. Tells you exactly when tanks are properly full.
3. Saves up to 30% of driver and truck time.
4. Pays for itself during the first season.
5. Provides for clean, convenient delivery that can compete with any other type of fuel delivery.

Over 4000 Fuel Oil Dealers throughout the country have taken "LC" ACTION. Each is doing better today because of it.

SCULLY SIGNAL COMPANY

76 First Street, Cambridge 41, Mass.

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

Aids for "LC" ACTION

COLORFUL FOLDERS ready for your use as mailing enclosures. Tell complete story to your customers as to benefits you give them by equipping their fuel tanks with the Whistling VENTALARM Signal.

VENTALARM INSURANCE POLICY

For distribution with VENTALARM Signal installation. Educates and impresses; binds customer closer.

SAMPLE LETTERS for use when offering new type VENTALARM Oil Delivery. Proven customer good-will builders.

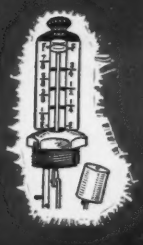
Fuel Oil Company pamphlets and sample customer mailings sent immediately upon request. Customer mailing folders available at less than $10 per 1000 copies.

Contact your REGULAR SUPPLY HOUSE for VENTALARM Signal in a variety of sizes . . . and other Scully Fuel Oil Delivery Aids.

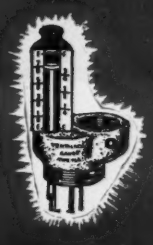
All Scully Products are manufactured under U. S. & Foreign patents or patents pending.

VENTALARM® SIGNAL
Whistling Tank Fill Signal

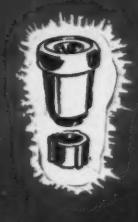
SCULLY® TANK GAUGE
Easy-to-See Gauge Simple, Sturdy, Economical



VENTALARM® TANK GAUGE
Combination Audible Signal and Visible Gauge

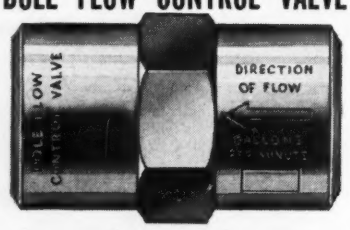


FASFILL® CONNECTOR
Portable connection for gun and fill pipes of all sizes.

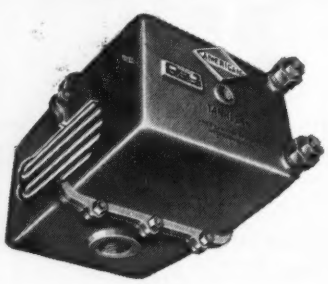


Combine to give you
MORE
FOR YOUR MONEY!

A proven and popular
DOLE FLOW CONTROL VALVE



is now included in every
AMERICAN TUBE TANKLESS PACKAGE



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Incorporated
RIVERDALE BLDG., NATICK, RHODE ISLAND

firsthand the lobby he had described in glowing terms. As it was nearly three p.m. I thought the lobby would be empty and I was sure Art would be hard at work in our office which was only two blocks away from the "Y."

Walking in I made a quick survey of the lobby's furnishings and decorations. Then I saw a game of checkers being played by two young men half hidden in a far corner. As I moved toward the game I was surprised to see that one of the players was Art who I thought hard at work on his copy for the next issue.

As I stopped to watch the game he looked up at me, blushed slightly (he blushed easily *then*), and said, "Somebody was using the typewriter." As flimsy an excuse as I ever heard, for by that time we owned at least three typewriters.

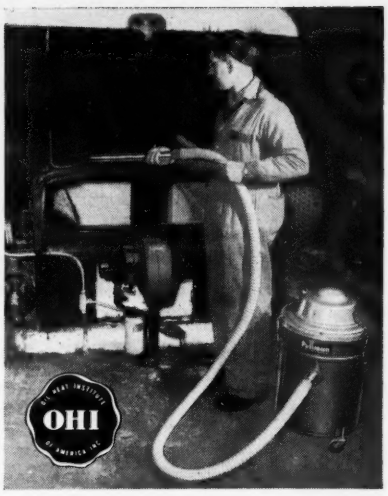
He asks that I officially deny that the editorial department has ever let him know the real identity of Joe Keyhole, our famous post-convention issue contributor. This information is kept an editorial secret for security reasons. At any rate, "Joe Keyhole Scouts the Show" was the first article I completely read in our May '52 issue. That must be true of many of our loyal readers and advertisers.

Objective Detachment

One advantage of living at Alfalfa Hill I mentioned earlier. It gives some objective detachment. Another was the pleasure of seeing the recent 29th Anniversary Exposition of the O.H.I. on a television screen while seated 40 miles from Philadelphia.

Then I can look out the window and catch the reflection of star light on the surface of Lake Truman, a fish pond at the foot of the lawn. And it seems to me the little 32-page pocked sized magazine that was our first issue has helped make this a cleaner, more comfortable world in which to live. Yet it is only a start.

The heat pump, solar heating and heating with atomic energy are among the interesting possibilities during the next three decades. The big tasks lie ahead of us and our loyal friends, our readers. And I know we are both equal to them.



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Furnace & Boiler
Vacuum Cleaner

Here is the vacuum cleaner that gets you into the cellar and allows cleaning jobs to develop into profitable service work. Light in weight and very portable — only 30 pounds, yet has 1½ bushel capacity. No outside bag to worry about. Clean, neat appearance for working in living quarters of the home. Integral motor, internal filter, and circular air flow increase the efficiency of the PULLMAN vacuum and allows manufacturing cost savings which are reflected in its low price. No maintenance to worry about — just empty the container. Ball bearing, life lubricated, sealed motor. Electro-welded steel container. Equipped with 35′ cord, 10′ hose, and 27″ crevice tool for only $159.50 list, less trade discounts. Send for circular and name of nearest jobber.

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Pullman

PULLMAN SALES CORP.
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During these many years Jefferson has *always* paced ignition transformer development with outstanding improvements that have aided the growth of the oil heating industry. The Mid-Point Ground design and Radio Interference Barrier were patented Jefferson developments.

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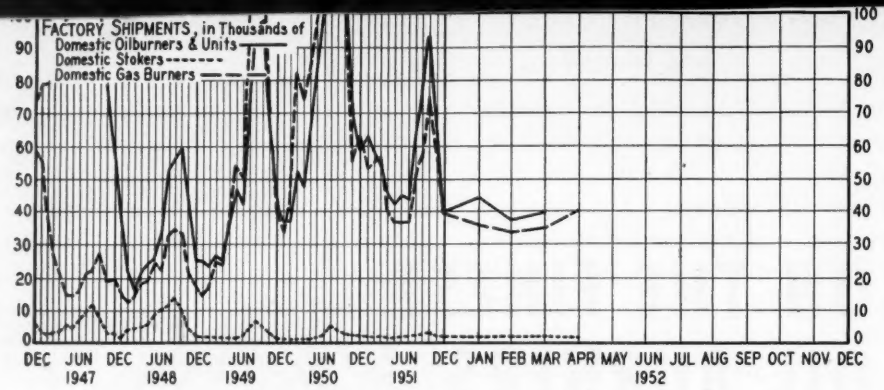
Jefferson JEFFERSON ELECTRIC **TRANSFORMERS**

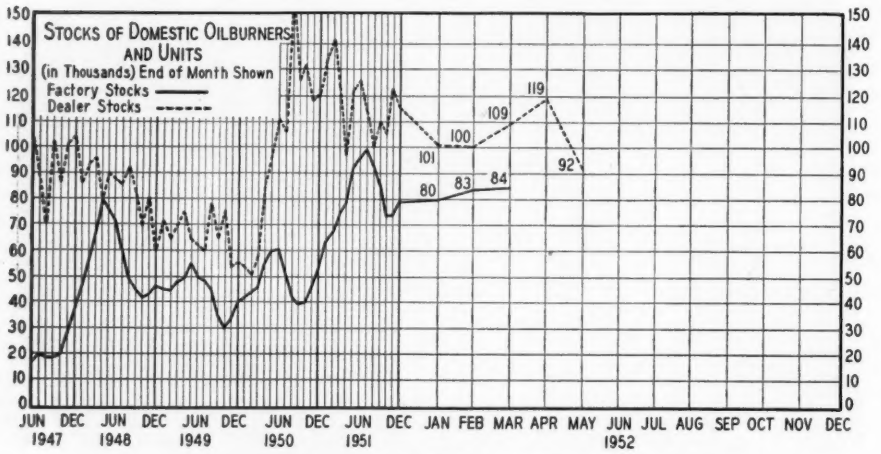

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 147 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	MARCH			THREE MONTHS		
	1952	*1951*	*Percent Change*	*1952*	*1951*	*Percent Change*
Conversion	**25,922**	**38,231**	— 32.2	84,304	123,544	— 31.7
Boiler Units	2,704	5,747	— 52.9	8,086	17,694	— 54.3
Furnace Units	11,242	10,995	— 2.2	30,404	36,213	— 16.0
All Domestic	39,868	54,973	— 27.4	122,794	177,451	— 30.8
Commercial	2,276	4,016	— 43.3	7,282	11,582	— 37.1
Total	42,144	58,989	— 28.5	130,076	189,033	— 31.2

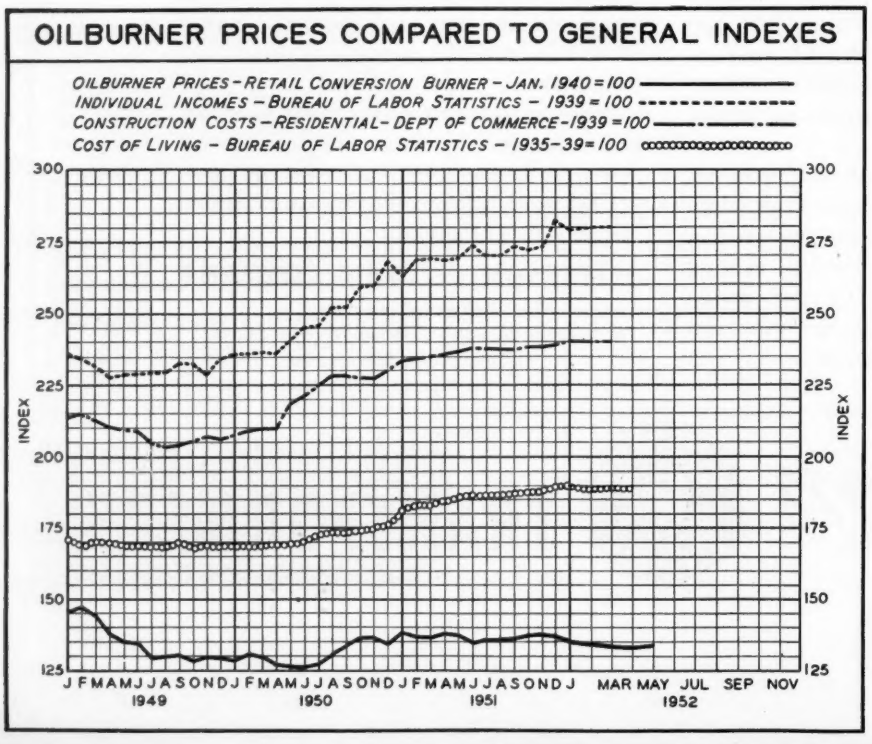


May Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
May Aver.	$328	$704	$641
April Aver.	329	700	642

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
May	138.8	Six months ago	138.3	May	133.6	Six months ago	136.8
April	141.1	Year ago	138.8	April	132.9	Year ago	136.6


OILBURNER PRICES COMPARED TO GENERAL INDEXES
OILBURNER PRICES – RETAIL CONVERSION BURNER – JAN. 1940 = 100
INDIVIDUAL INCOMES – BUREAU OF LABOR STATISTICS – 1939 = 100
CONSTRUCTION COSTS – RESIDENTIAL – DEPT OF COMMERCE – 1939 = 100
COST OF LIVING – BUREAU OF LABOR STATISTICS – 1935-39 = 100
INDEX
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1949 1950 1951 1952

Oilheating Trends

ESTIMATED INSTALLATIONS of domestic oilburners and units in May were 52,947 compared with 47,892 in the same month last year, showing a rise of 11%. The total for the first five months is estimated at 207,670, which is also 11% above last year's 187,381.

The May installations were divided: New homes 16,336; Replacements of old oilburners 5,799; Conversions from other fuels 30,812.

BURNER STOCKS: There was a surprising drop in dealer stocks of domestic oilburners and units in May, from an estimated 118,966 at the start of the month to 91,571 at the end. It is obvious that in spite of fairly good sales the dealers were disturbed by the oil strike and its threat of fueloil shortage publicity. The steel strike has also been an upsetting factor to business confidence. The June 1 stocks were divided: Conversion burners 53,993; Boiler-burner units 16,105; Furnace-burner units 21,473.

TANK STOCKS: These also took a nose-dive during May dropping from approximately 131,138 at the start of the month to 108,531 at the close. On June 1 last year they had been 157,882.

By sizes the June 1 stocks of tanks in dealer hands were divided: 220-275 gallon 98,028; sizes 550-675 gallon 6,107; sizes 1,000 gallons or larger 4,396.

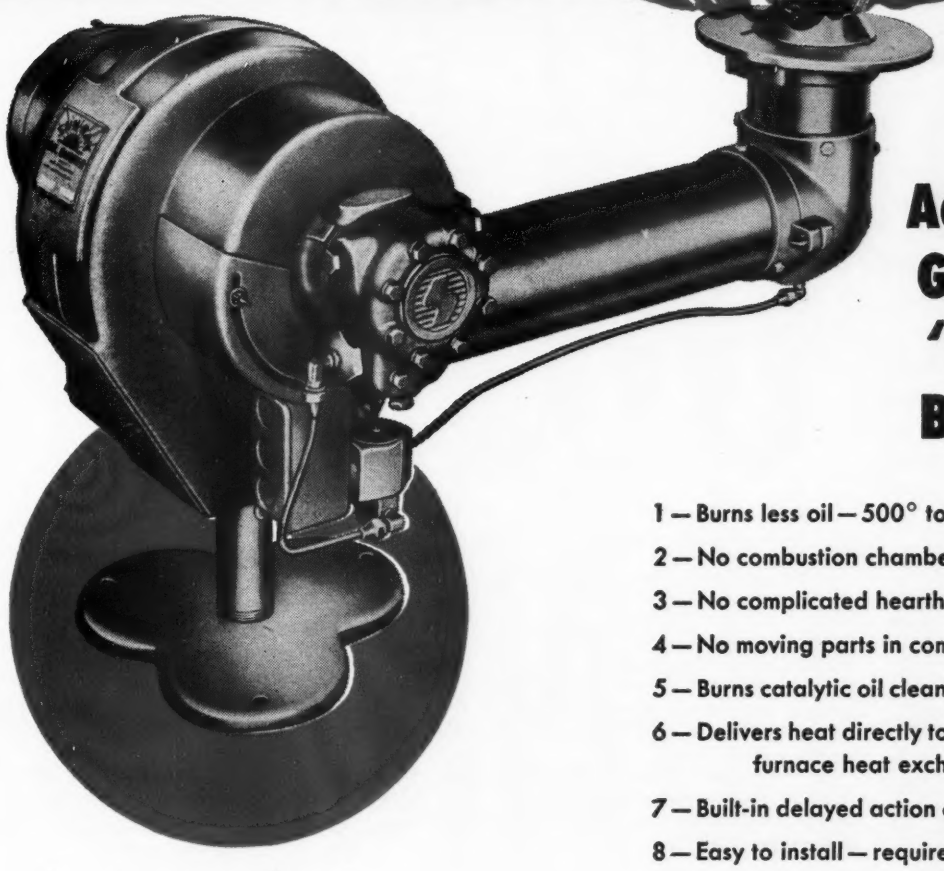
The average price paid by dealers in May for a 275 gallon tank was the same as the previous month, $36. This compares with a $44 average a year ago. Sectional prices on June 1 for the 275 gallon tank were New England $31; Mid-Atlantic $38; Midwest $34; Pacific Northwest $44.

OILBURNER IGNITION: At the request of an industry member a check was made this month on types of ignition prevalent in domestic oilburners. The survey revealed that approximately 29% of all oilburners in use today employ the constant type of ignition . . . the other 71% use intermittent ignition. The reporting group was then asked whether constant ignition is gaining in popularity in their mar-

NEW SUN-RAY

SERIES "VS"

VERTICAL FLAME BURNER



The New Addition to the Great Sun-Ray "Shell" Head Burner Family

1 — Burns less oil — 500° to 600° F. hotter flame.

2 — No combustion chamber required.

3 — No complicated hearth to build.

4 — No moving parts in combustion area.

5 — Burns catalytic oil cleanly and completely.

6 — Delivers heat directly to boiler sections or furnace heat exchangers.

7 — Built-in delayed action oil brake.

8 — Easy to install — requires less service.

9 — Tops in consumer appeal.

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OIL BURNERS

SUN-RAY BURNER MFG. CORP.

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fueloil & oilheat

kets. The vote was 47% Yes, and 53% No. This would indicate some little gain for the constant type because those dealers who reported no gain probably have about a static situation.

BURNER SALES OUTLOOK: For the country as a whole, dealers are expecting that oilburner installations this year will be about 6% below the totals of 1951. This is quite a change from their attitude at the start of the year when they were expecting that 1952 sales would be up an average of 9%. This pessimism as reported at the start of June again reflects uncertainty over the effects of the oil strike and what the publicity may do to sales. By sections of the country, New England dealers expect 1952 sales for the full year to be down 8%; Mid-Atlantic dealers look for a 3% decline; the composite opinion of the Midwest group is that there will be a 4% drop; the Pacific Northwest dealers visualize 1952 sales at 24% below last year. The big cities in the Northwest are pretty close to saturation on oilheating and then that is the region facing the worst threat on oil supply.

ALL-YEAR AIRCONDITIONING: There has been quite a little recent publicity by General Electric on three builder developments where every home is getting year-round air-conditioning with refrigerated cooling in the summer. These particular developments are using gas for fuel. A check was made among the reporting group to learn how much of this year-round airconditioning was being done with oil as the heating fuel. From the returns it appears that in the first five months of this year approximately 1,673 such oil-fired installations were made in the country as a whole. No single reporting dealer has done a big job with this all-year equipment. Their 1952 installations ranged from 1 to 14. They point out that most of these combination heating and cooling jobs are in new homes, about 5 out of 6 being installed that way.

The average selling price for a year-round job installed in a typical house with a 100,000 Btu. heat loss is $2,350. This includes the heating plant, the refrigerated cooling, and the ducts. The prices ranged from a high of $4,000 to a low of $1,700.

Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
May		5 MONTHS			May		5 MONTHS	
1952	1951	1952	1951		1952	1951	1952	1951
49	57	160	283	Albany, N. Y.	..	..	..	..
..	263	..	1234	Baltimore, Md.	311	516	1761	2275
..	..	..	..	Binghamton, N. Y.	10	13	45	37
..	..	..	..	Bloomfield, N. J.	4	7	25	30
..	475	..	2284	Boston, Mass.	44	26	172	116
54	72	289	368	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	75	53	265	251
14	3	276	13	Columbus, O.	..	..	..	..
..	..	..	..	Des Moines, Ia.	..	109	..	379
..	247	..	1237	Detroit, Mich.	372	726	1818	3450
56	47	161	185	Elizabeth, N. J.	4	4	28	29
30	71	164	187	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	31	52	134	203
..	..	..	..	Hackensack, N. J.	..	15	..	44
..	76	..	895	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
55	61	155	151	Irvington, N. J.	5	6	15	23
..	..	..	..	Lynn, Mass.	15	13	85	48
8	25	153	165	Meriden, Conn.	..	..	..	..
..	71	..	350	Milwaukee, Wisc.	..	326	..	1160
42	34	487	260	Minneapolis, Minn.	105	188	405	610
27	33	98	94	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	8	2	35	6
38	18	111	95	Mt. Vernon, N. Y.	..	..	..	..
203	179	648	612	Newark, N. J.	..	..	..	..
61	47	567	295	New Bedford, Mass.	..	..	..	..
37	47	290	209	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
15	48	133	221	New Rochelle, N. Y.	28	10	115	57
..	2367	..	9978	New York City (total)	..	..	..	..
..	1800	..	7559	Brooklyn-Queens	..	..	..	..
580	567	2654	2419	Manhattan, Bronx, Rchd	..	..	..	..
..	253	..	797	Norfolk, Va.	133	80	737	381
..	..	..	..	Oakland, Calif.	..	..	..	..
33	47	212	252	Omaha, Neb.	114	172	409	457
24	25	71	77	Orange, N. J.	3	5	8	27
31	32	97	82	Passaic, N. J.	..	..	..	..
89	75	238	224	Paterson, N. J.	19	15	87	79
..	355	..	2990	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	20	18	82	80
55	44	149	228	Portland, Me.	8	30	49	79
401	377	1677	1586	Portland, Oreg.	132	145	604	733
11	14	59	61	Poughkeepsie, N. Y.	..	..	..	..
84	61	492	307	Providence, R. I.	24	22	80	108
..	..	..	..	Reading, Pa.	15	7	33	40
18	59	189	362	Richmond, Va.	48	49	279	344
57	56	206	197	Roanoke, Va.	..	..	..	..
272	275	1021	840	Rochester, N. Y.	..	..	..	..
..	20	..	104	Rockville Center, N. Y.	..	12	..	46
17	25	123	122	Salem, Mass.	1	8	20	34
..	156	..	348	St. Louis, Mo.	76	66	225	258
..	42	..	298	St. Paul, Minn.	129	141	505	459
..	49	..	333	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	152	209	828	935
..	..	..	..	Springfield, Mass.	62	103	369	282
42	35	286	314	Stamford, Conn.	..	..	..	..
5	6	34	27	Syracuse, N. Y.	61	4	201	98
..	..	..	..	Trenton, N. J.	43	8	92	25
..	..	..	..	Utica, N. Y.	18	17	58	68
77	48	437	366	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	33	22	136	106
37	45	105	124	White Plains, N. Y.	15	11	58	52
50	60	251	337	Wilmington, Del.	30	15	74	128
175	178	609	618	Worcester, Mass.	..	..	..	..
61	92	267	256	Yonkers, N. Y.	..	..	..	..
2808	2863	12869	11937	*Totals*	2148	2763	9837	11908
—1.9		+7.8		*Percent Change*	—22.2		—17.4	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

FUELOIL WORKLOADS: Fueloil marketers are often curious as to whether their employees handle about the same amount of work as other companies get, so a brief check was made this month. The first question was about degree-day operators. The average experience of the reporting group is that one degree day operator can handle 2,600 customers. There was

(*Please turn to page* 161)

OUTSTANDING

for the way they stand up on every job!

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you can depend on Delco motors
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far longer than ordinary motors.
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fueloil & oilheat

Government Influences on Fuels

by
Milburn Petty

WASHINGTON — Fuel Oil marketers were encouraged by the Office of Price Stabilization "cutting us in" on the general advance in East Coast heating oil price ceilings.

This action was taken just as Congress was voting to shorten the life of the OPS and economic controls.

Even so, marketers hailed this as recognition of the principle that any substantial price increase should include wider margins and not be just a pass-through to the consumer, which they have long advocated.

It remains to be seen what the major suppliers will do now about their price structures.

Steelman Settles Price Row

Row between the Petroleum Administration for Defense and Economic Stabilizer Putnam, over the East Coast distillate fuel oil price issue, was finally settled by Chief Mobilizer Steelman.

Fuel price officials of the OPS recommended adjustments which would have raised the prevailing New York tank car ceiling by 1.2¢. This was made up of a spelled-out ceiling of 8¢ for No. 2 oil at the Gulf, 0.5¢ for higher transportation cost and 0.2¢ to widen the spread for terminal operators. (Nothing extra was included for jobber-distributor margins although these officials planned to take care of such marketers, separately.)

Top OPS officials rejected this, saying the need for any price action had not been shown; and, even so, it should be limited to a spell-out of 7.8¢ at the Gulf and 0.3¢ higher tank car price on the East Coast.

PAD Supports Price Increase

PAD backed up the protests of Gulf Coast independent refiners who contended that this would be a rollback with some of them having individual ceilings of as much as 8.65¢ and would force a cutback in fuel oil yields.

Upshot was that Steelman ordered the OPS to raise East Coast retail price ceilings on No. 2 (with customary differentials for kerosene and other light fuel oils) by 0.8¢ and "reserve" 0.15¢ of this increase to widen margins for jobbers and distributors.

(OPS has interpreted this to mean that the full increase should apply to "rack" sales by peddlers as well as on tankwagon deliveries. Amount of the increase tapers off below Norfolk but the 0.15¢ jobber margin increase was allowed from Maine to Florida. Increase is effective in all areas usually supplied from ocean terminals and applies to all oil sold in these areas regardless of whether it comes from the seaboard or not. The New York tank car ceiling, for example, was set at 9.75¢.)

"Equitable Distribution" Urged

Steelman's "package" deal included not only a 65-point increase in East Coast tank car ceilings but steps to assure increased fuel oil production, equitable distribution of available supplies and adequate tanker availability.

Besides ordering the higher ceilings, he wrote to Petroleum Administrator Chapman requesting he take whatever steps are necessary to insure adequate supplies and "equitable distribution." U. S. Maritime Administration was asked to take measures needed to supply the tankers.

PAD Expects More Supplies

Big question now is—what will leading suppliers do?

PAD expects that the 65-point increase in tank car ceilings—with no earmarking—will provide "flexibility" for each company to make the best use of to increase supplies; also, that East Coast buyers—including majors—will be in a position to place larger orders with Gulf Independent refiners more in line with ceilings of those refiners, thus encouraging increased yields.

OPS Plans Margin Relief

With the East Coast issue out of the way, the OPS petroleum branch turned to finalizing its plans to provide margin relief for tankwagon sellers of home heating oils in "hardship areas" throughout the country.

Objective of this program is to restore margins to levels prevailing in the 12-month period immediately preceding the outbreak of the Korean War.

Questionnaires to obtain profit-and-loss on the marketer's fuel oil operations—including burner servicing—were worked up in co-operation with a group of jobber associations.

OPS district offices would be authorized to grant "hardship" relief on an area basis without going to Washington (except in unusual cases).

If a "representative sample" of jobbers and distributors in a given area can show that their "net income before taxes"—in the aggregate—are less now than a tankwagon increase sufficient to restore margins to the Pre-Korean level would be granted for the area. Such increase would be applicable to *all* sellers in the area, including major.

This local margin relief would be in addition to any regional increase.

For example, the 0.3¢ increase in Baltimore tankwagon prices would be on top of the increase authorized for the East Coast generally.

Warren Takes Over PAD's Reins

J. Ed Warren, independent oil producer from Midland, Texas, who succeeded Bruce K. Brown as deputy petroleum administrator, has waded right into the problem of fuel oil shortages resulting from the recent strike.

He went to bat for higher ceilings—and succeeded. And he continues to urge all-out refinery operations, warning that if output is not stepped up "we will be in a bad way."

Record-breaking refinery runs have followed Warren's appeal.

Want Gas Restrictions Kept On

Consensus of state utilities commissioners, meeting here June 27 with PAD officials, was that PAD's order restricting expansion of natural gas markets should be continued until there is a "more comfortable balance" in gas supply and demand.

However, some slight modifications in PAD's Order No. 2 were suggested such as permitting a carryover of any unused portion of the 5% new connections quota to the next year in communities newly receiving natural gas.

PAD's reply was that even though the gas outlook was "somewhat improved," they wanted to study the whole situation fully before making any changes in the order.

Oilheating Activities in 1922

Worries there were, but Enthusiasm was strong in the early Issues of "FUELOIL"

by
Robert Gray

ON THIS THIRTIETH ANNIVERSARY of the publication, the problems of the oilheating industry are not vastly different from what they were back in 1922 when FUELOIL & OIL HEAT was born. The difference is mainly in degree, for in 1922 the industry installed 35,000 domestic oilburners and in 1952 expects to put in upwards of 700,000.

Volume I of FUELOIL FOR HEAT & POWER, first name of the magazine, comprised only six issues instead of the customary 12, for the start was made at midyear. Browsing through the office copy of Volume I reminds latecomers that oilheating was a lusty youngster ready to do battle with anyone threatening a fueloil shortage, or with anyone who thought that oilburner explosions were lethal.

Domestic oilheating was just getting a start in 1922. On the other hand, commercial-industrial oilburning was going stronger, having been born for all practical purposes at the Chicago World's Fair in 1894. As a result, the earliest numbers of the magazine were largely devoted to heavy oil while domestic oilburning was just showing up in a department called "Heating the Home." The emphasis shifted to the domestic side as the industry itself moved that way, and by the time of the magazine's seventh birthday, when its name was altered to FUELOIL JOURNAL, heavy oilburning had less than 10% of the editorial content. Commercial and Industrial installations then came back with a special section of the magazine in 1951.

The very first issue, July 1922, finds Harry Shaw explaining that while crude oil may be, and often is, used as fuel, the more common practice is to skim the gasoline from the crude before burning, partly as a matter of expense and partly to remove the danger of explosion.

Shaw then lets us in on some smart sales repartee of the period by telling of the Chicago business man who was slow in signing an oilburner order for his office building because of the higher fuel expense. The salesman, to avoid an impasse, shifted the scene. He asked the prospect how he would like to save 25% on his electric bill for lighting. This brought the desired eager comeback of "how?" "By using gas lights instead of electricity," the salesman explained. "But," said the building owner, "our folks wouldn't stand for the inconvenience." "Neither would you stand for burning coal if you had ever tried fueloil," grinned the salesman as he pushed his pen into the prospect's hand.

"Prosperity Special"

In the photograph section of that first issue we see "Prosperity Special," a train of 20 oilburning locomotives leaving the Baldwin plant . . . also a shot of the S.S. Majestic, largest ship afloat and burning oil.

In a story on oil supply we find our earliest instance of razzing the bigwigs for their bad guesses. The unnamed author quotes Van H. Manning, head of the Bureau of Mines, as having stuck his neck out back in 1916. When asked for some information on oilburners, he said that the Bureau did not recommend the use of oil for heating and he had no information on burners, for the reason that the supply of petroleum would be used up by 1943, while coal would last for 400 years. Through the years since then a good number of stout men have stubbed their reputations on statements of the kind, while every year save one has seen new peaks in proved reserves as well as in consumption of petroleum.

Reported *in the first issue of* FUEL OIL FOR HEAT & POWER *was the formation of The National Oil Burning Equipment Association, Chicago, whose insignia is shown here. Chief purpose of the organization was announced as promoting "the use of oil as a fuel."*

The author in this instance explains that fueloil is like cotton seed oil. Cotton is raised for the lint and oil is the residue. Fueloil is the residue of refining for gasoline, he goes on to explain; so as long as we produce gasoline there will be plenty of fueloil. A couple of months later the same writer says fueloil is like shavings and sawdust . . . as long as we need lumber there will always be shavings and sawdust. How little those early oilheating men could see of the tremendous expansion of 30 years down the road, to the time when fueloil would no longer be a by-product. Today gasoline is almost the by-product, or at least some refiners are complaining that they have to make too much gasoline in meeting the fueloil demand, with the result that gasoline prices go soft.

In the "Fueloil markets" department of that first issue we find, "Refiners have large stocks and are anxious to ship, and to the end of securing orders for prompt shipment they have held prices lower than would seem reasonable with such an incentive to higher

prices as the continuance of the coal strike and the horrible violence which has marked its later stages. The miners are ready to go to any lengths to prevent losing the strike. Murder and massacre, cruel and deliberate, which has been resorted to as a means of intimidation and to gain their end which now is an opportunity to work at the old rate." The writers had drama in those days.

NFPA eliminates Restriction

In a convention of the National Fire Protection Assn., held at Atlantic City that year, a change was made in "Domestic fueloil regulations" by eliminating the sentence that "the use of oil as fuel for domestic purposes is considered as more hazardous than the use of coal, wood and coke."

In an article "Farmers want Oil for Fuel" the writer sees a big opportunity for sales of some proven apparatus among the better class of farmers, and goes on, "It seems strange that the dealers in oil in the smaller towns who supply the farming districts are so indifferent to the sale of oil for heating. There is a waiting market and if the oilburner manufacturer has to he can go into the business and distribute fueloil and accessories." This is probably the earliest suggestion of getting burners and oil together in the same company and while the writer sees manufacturers rather than dealers going into oil sales, it should be recalled that in early times much factory distribution was local and the manufacturer did much of the retailing.

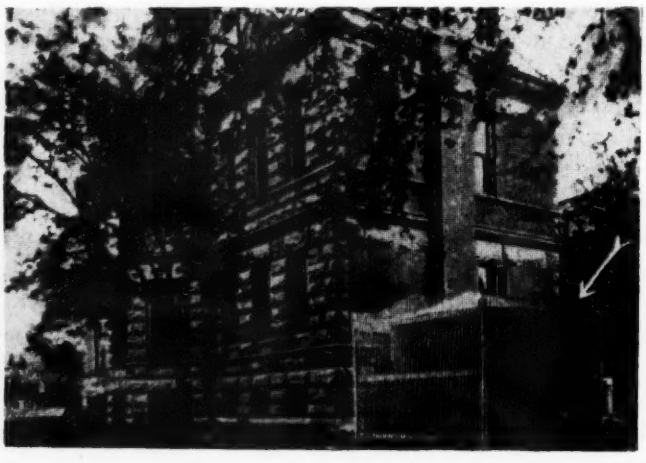
The first national trade association for oilheating was announced in the July 1922 issue . . . The National Oil Burning Equipment Assn., Chicago, with a slogan, "Heat with Oil." The officers were: W. T. Dean, The Combustion Co., president, H. H. Shurig, Chicago Steel Tank Co., vice-president, Edward Sladkey, The Kleen Heet Co., treasurer, and Chas. E. Gaer, Sterling Refining Co., Secretary. The officers, plus a Mr. Lutsenkirchen of the Victor Oil Burner Co. made up the board of directors.

It was not until the following year that the American Oil Burner Assn., predecessor of the Oil Heat Institute, was organized.

"Fuel Users must turn to Distillates of lower Gravity," headlines an article by H. T. Bayard. The argument then was not one of supply but of price. Oil cost considerably more than any type of coal at the time and the burner people wanted to reduce the obvious sales resistance. The author uses the customary argument that heavier distillates carry more Btu per gallon and if the burner makers will only arrange to accommodate 23-27 gravity oils instead of the then current 32-34, the millenium would be just around the corner.

Concrete tanks for fueloil storage were described as entirely practical in 1922, with Westinghouse Electric using several of them in 125,000 gallon sizes. The U. S. Bureau of Standards had inspected and found them entirely sastifactory. The much lower cost of steel soon drove concrete out of consideration, although there has been some revival of thinking on the subject in the past year.

This illustration, *taken from the September 1922 issue, shows how oil storage tanks were placed above-ground in some instances. The tank was covered with decorative lattice work and the caption explained that this was "One of several ways to conceal the storage tank for the home burner. Vines often cover the lattice work."*



The second month of the new magazine showed Leod Becker as editor, while Harry Shaw had held the title for the first issue. It was nearly two years later, or June 1924, when Becker became owner of the publication, and in September 1924 he moved it from Galesburg, Ill. to New York.

The masthead page at the start of Becker's ownership shows Keith Fanshier and Arthur G. Winkler as associate editors. Fanshier is now editor of "*Oil Daily*." Raymond Shaw, brother of Harry and in recent years owner of Chek-Chart, was the first advertising manager of FUELOIL.

Fueloil stops Waste

G. B. Williams, sales manager, Johnson Oil & Refining Co., writing in the August number, sees the growth of fueloil demand as stopping the refinery wastes and says facetiously that a refiner now markets everything but the odor of petroleum. He then points out that "Oil may be used for fuel wherever coal can be used for fuel and whenever advantages and disadvantages of the two fuels are put to a test, the consumption of fueloil grows apace. Were the original costs equal, we would immediately face a shortage of fueloil much more acute than any gasoline scarcity ever contemplated." What would Mr. Williams be thinking today, with oil the cheapest of all fuels along the East Coast? He would be saying, "Watch out for threats of shortages and restrictions."

The hazard element keeps recurring in the early writings, principally with the magazine working to dispel the popular fear of liquid fuels. On the editorial page in August 1922 is this paragraph, "A graphic demonstration of the safety of fueloil was given in the San Francisco earthquake and fire. Of 15 fueloil storage tanks located in the heart of the section swept by fire, not one either ignited or exploded—a performance equalled by no other fuel."

Writer J. B. Waldo urges buying fueloil in August to save money. Then his story swings into the horrors of domestic coalfiring and the contrasting delights with oil, particularly stressing convenience. "With the oil heater," he says, "a glance from time to time is all

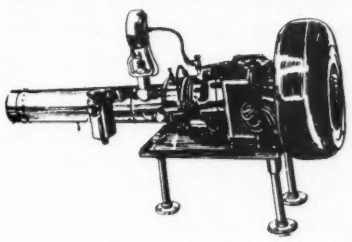
WILLIAMS
OIL-O-MATIC
HEATING

HEATING WITH OIL IS NO FAD
Oil is positively supplanting coal for steam and heating.

OIL-O-MATIC THE PROVEN DEVICE
Four years' successful operation.

BURNS FUEL OIL 30 TO 32 GRAVITY
Automatic in every respect, day and night. Human element eliminated. Thermostatic regulation.

OIL-O-MATIC A LIFE TIME INVESTMENT



Foresighted people are now providing for next winter's heat.

ALL HOMES AND SMALL INDUSTRIALS INTERESTED

The best selling specialty on the market today. Territory open for substantial dealers and state distributors.

No Smell No Soot No Smoke No Dirt

C. U. Williams & Son Co.
Factory--Bloomington, Ill.

Get in on the "Cream"

Oil burners for house heating are becoming more popular each day. Particularly now, when a coal shortage is inevitable, house owners are turning to oil for heat.

Get your share of this booming business.

A. B. C. OIL BURNER

is unquestionably the best oil burner in existence today. We say this firmly, without fear of successful contradiction. Compare its PROVEN features with the "talking points" of other burners and decide for yourself.

A. B. C. Oil Burner is comparatively simple, practically noiseless. Easily installed in any furnace. It is the only oil burner that completely atomizes the oil. It uses cheaper fuel. Completely automatic. Thoroughly guaranteed. The price is low.

Altogether, a remarkable opportunity for live dealers to come in for the large profits attendent upon the sale of the A. B. C. Write for full particulars—TODAY

Automatic Burner Corporation
2309 Lincoln Avenue Chicago, Illinois

Fuel Oil Burning Equipment

We manufacture the particular type of burner best adaptable to your boiler plant, also the accessory equipment to complete the installation.

Our equipment comprises a large range of burners, for both high and low pressure.

We also operate our own fleet of motor trucks for fuel oil delivery in New York City, Boston and Providence.

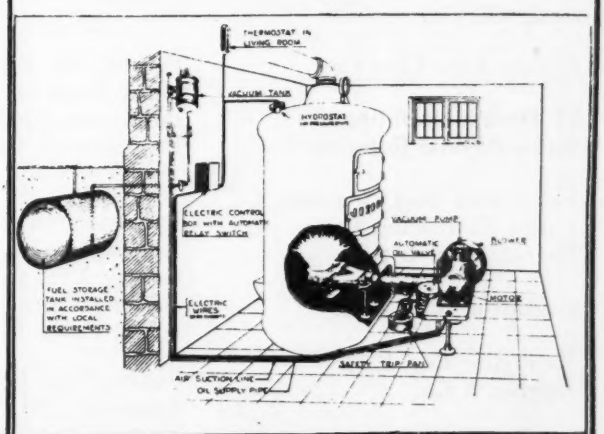
Petroleum Heat and Power Company

100 Boylston St. Boston, Mass. | 511 5th Ave. New York N. Y. | Turks Head Bldg. Providence R. I.

Kleen-Heet
NO LABOR · NO COAL · NO ASHES

After passing thru five years of development and refinement. Kleen-Heet is now recognized as

The Leading, The Highest Class Completely Automatic Oil Burning System



Above design shows typical installation.

It is automatically controlled by thermostat, employing the vaporizing principle. No pressures—no nozzles—no atomizers. Approved by the National Board of Fire Underwriters.

Kleen-Heet
NO LABOR · NO COAL · NO ASHES

Division of
WINSLOW BOILER & ENGINEERING CO.
General Offices
208 S. La Salle St. CHICAGO, ILLINOIS

Here are reproductions *of advertisements placed by four oilburner manufacturers in the early issues of* FUEL OIL FOR HEAT & POWER, *marking its 30th Anniversary with this issue. The Oil-O-Matic ad appeared in the very first issue, July 1922, followed in August by the A. B. C. and Kleen Heet ads. The Petroleum Heat & Power Co. insertion ran in the December 1922 issue. These advertisements, reproduced almost full size since the magazine originally was pocket-size, are shown because the companies still are active today, although not necessarily under the same ownership or original organizers.*

that must be given to the heating plant to be sure that it is working properly. Many an owner of an oilheating plant does not make a real inspection of the burner more than once a week. There is really nothing for him to do."

Advertiser Hughes & Company has a slogan, "Do you buy Fueloil or Heat," hinting that all oil in those days wasn't the same. Ernest Hughes in recent years has sold out to Sinclair and is a vice-president of that major company. Which reminds us that several of the early Chicago fueloil companies were absorbed by majors. Murphy-Miles Oil Co., a consistent early advertiser, was bought by Indiana Standard. Everett Miles, former head man, has for some years been manager of Indiana's fueloil department.

Then Frank Spencer sold his Spencer Petroleum Co. to Socony-Vacuum and entered its Midwest Div. as fueloil manager until he retired last year. Spencer used the back cover of the new magazine during its first four years and thus was its best customer through the formative period.

Frank had just left his partner Gustafson and formed his own company the same month the magazine started and in his first ad he announced that his company is "reared on a patform of stability, service and satisfaction." During the fuel rationing days of the last war and also while serving as the first national chairman of the Distribution Div. of OHI, friends will recall that Frank was still "rearing."

And among oil company advertisers that first year we find Roxana Petroleum Corp., showing a shell trademark . . . the forerunner of Shell's entry to the American market in 1927. Even then, Roxana was proud of its burner and fuel testing laboratory.

These first sold through Advertising

COMPANIES USING SPACE IN 1922 ISSUES OF "FUELOIL"

Acme Petroleum Co.
Advanced Petroleum Co.
Automatic Burner Corp.

Bailey, Wm. M. & Co.
Barnsdall Refining Co.
Buffalo Meter Co.
Bunting Iron Works
Butler Mfg. Co.

Calumet Tank & Mfg. Co.
Camden Petroleum Co.
Columbian Steel Tank Co.
Cornell Vacuum Burner Co.
Craig Oil Co.

Denver Fire Clay Co.

El Dorado Refining Co.
Ennis-Bayard Refining Co.

Fabricated Steel Product Co.
Falley Petroleum Co.
Foerst, John & Sons

Gustafson, C. A. Co.

Heat-Rite Co.
Hughes & Co.

Ideal Heater Mfg. Co.
Indiahoma Refining Co.
Industrial Petroleum Co.

Jewett & Sowers Oil Co.

Keystone Oil & Mfg. Co.
Kleen Heat Burner Co.

Lancaster Iron Works
Leader Iron Works
Lillibridge Heating Co.

McDonald, A. Y., Mfg. Co.
Miller Petroleum Co.
Moore, Dale W.
Morrison Bros.
Murphy-Miles Oil Co.

National Airoil Burner Co.
Nebraska-Iowa Steel Tank Co.

Ohio Refining Co.
Oliver Oil-Gas Burner Co.
Otis-Gray Co.

Peerless Oil Burner Co.
Penn Franklin Lubricating Co.
Petroleum Heat & Power Co.
Producers & Refiners Corp.
Pure Oil Co.

Refiners Petroleum Co.
Riley-Corcoran Co.
Rotary Mfg. Co.
Roxana Petroleum Co.
Ryan, F. D., Co.

Seneca Petroleum Co.
Sagamore Oil Corp.
Spencer Petroleum Co.
Standard Steel Works
St. Louis Pump & Eqpt. Co.

Tate-Jones & Co., Inc.
Taxman Refining Co.

Viking Pump Co.

Williams, C. U., & Sons Co.
Witherup, L. P.

Competitive Fuels

R. P. Maynard, an engineer for Wayne Tank & Pump Co., writing in the August number about competitive fuels, had this on gas, "Although natural gas costs slightly more than fueloil its use is not altogether dependable due to the constantly diminishing supply. The present increasing sliding scale rates for natural gas have been arranged to discourage its industrial use and have done so to a great extent. Even the few industries still using natural gas altogether have installed oil-burning equipment for use in case of emergency."

The September 1922 issue had a picture page, "The Old and the New," with "actual scenes in front of a Boston office building." First it shows a coal delivery, apparently before they had coal chutes. A large truck has backed to the curb, dumped its whole load on the sidewalk near a manhole, virtually blocking the walk. Well dressed citizens are picking their way through the chunks, a heartrending spectacle. The next picture shows a shiny Petroleum Heat & Power Co. truck parked at the curb with the driver and helper nonchalantly leaning against the truck bed with little concern for the pipe that fits the sidewalk hole. The passing citizens stroll within inches of the performance.

Speaking of trucks, there's another picture of a new tank truck "designed for the delivery of fueloil exclusively," made by the Heil Co., on a five-ton White chassis and with 1,500 gallon capacity. The Heil people, it seems, had built several fueloil truck tanks in the "past few months."

The best spark in that September number is the editorial page with these timely warnings:

"Not infrequently the users of oil fuels endeavor to burn oil with a piece of pipe, flattened at the end, as the

(*Please turn to page* 150)

Reminiscences and good Wishes

In which several oilheating Pioneers tell of early Happenings

Edit. Note: Looking back through the first issues of the magazine names of men and companies still active in the industry are not too often found. Among the exceptions are these who have written us about their early times and ours.

CHALMERS OIL BURNER CO.
Minneapolis

Editor:

I note with interest you propose to celebrate the 30th Anniversary of your valuable paper. You folks deserve great credit for all those 30 years of service to the industry.

Chalmers

Those years have been tough but enjoyable. How well I recall Mr. Becker's little thumb-nail sized Monthly that came to my office every month "way back in 1922." I kept them all and when Leod changed to a bigger sized page, I took every one of which I had 84 and had them bound into 7 volumes for the 7 years 1922 to 1927 inclusive and presented them to the Engineering Library of the University of Minnesota. They are there today, a monument to Leod D. Becker, who builded so much better than he knew.

Pioneer days are great days for American industry. Every man is helped by encouragement and FUEL-OIL & OIL HEAT should swell with pride over its splendid achievement during the past 30 years.

It's a just American claim that the Automatic Oilburner is a truly U.S.A. product and we can thank whatever gods there be that the Russians, so far at least, have not claimed priority!

Recollections? Well here's one. Some time in 1924 Leod and I were chatting at a Convention when he turned and remarked to me "CH I hope to see the day when you and I can sit together at one of these meetings and the boys will look at us and say "There sit the oldest two guys in the industry."

Big stories might be told about The Zoro Patent Estate and invasion of foreign markets by American Oil burners, but its forward not backward we need to look. Pastures are still green. Gas and oil and coal will all be gone in time and our children will be making electronic devices to keep us warm. These future energetic Americans will scan their trade Journal and its name will be "Atomic Energy Heating" successor to FUELOIL & OIL HEAT.

Oh, I know I'm old and crazy, but it's fun to get that way once in awhile. Looking ahead 1,000 years in fancy I hear a bunch of guys talking on Heating. Says A to B "Do you know my history book has something to say regarding two chaps Becker and Gray who published our magazine at the time Automatic Heating started"!

C. H. CHALMERS, *President*

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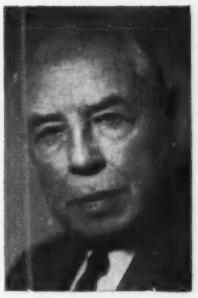
PEABODY ENGINEERING CORPORATION
New York

Editor:

Thinking of the early years, the old saying that "foresight is better than hindsight, but hindsight is a damn sight surer" brings to mind two incidents where my foresight was somewhat less than perfect.

Many years after the drilling of the Spindle Top gusher in 1901, and the "man of mystery," who flourished in those days, with his superior oilburner with "patent insides," the mechanical atomizing oilburner came into general use in this country.

I had some part in the development of that type of burner and once stated in a publisher paper that its limit of capacity appeared to be in the neighborhood of 240 lbs. of oil an hour. This statement was quoted, much to my embarrassment, for many years thereafter. Compared with single units for three tons of oil an hour, now in regular commercial use, such a prophecy looks a little ludicrous.



Peabody

Also, back in the 1920's I did not conceive that fueloils of the type now used for household purposes would be available in quantity for domestic burner use, but thought that all such burners would eventually be required to fire Bunker C fuel. I spent some little time and money in certain developments along those lines, which were not entirely unsuccessful, and abandoned them largely because I came to realize that the domestic oil-burner business required an entirely different type of approach and different customer relations from the business in which we were engaged, where we dealt directly with the customer, and each job was especially engineered to suit the particular conditions. This idea of mine regarding domestic burner fuels, was another poor estimate on my part.

Fortunately, most of my guesses were not so far "off the beam"; otherwise, I would not be writing you today as President of Peabody Engineering Corporation.

Possibly the citation of these two incidents may serve as a "red light" to some who are inclined to go "off the deep end" with prophecies regarding limits on future developments in the field of fuel burning.

E. H. PEABODY, *President*

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NATIONAL AIROIL BURNER COMPANY
Philadelphia

Editor:

It is very interesting to learn that FUELOIL & OIL HEAT is about to issue its 30th anniversary number.

As I look back in my Oil Burner Association file, which I have retained for these many years, I find the first letter is from the Shaw Publishing Company, Galesburg, Illinois, dated August 21, 1923, regarding the pro-

posed organization of an Oil Burner Association and reading as follows:

"On Friday September 7, a general meeting of both industrial and domestic burner manufacturers from all over the United States will be held at the Congress Hotel, Chicago, Illinois for the purpose of organizing a national association, electing officers and mapping out a program for the association's first year's activity."

Bailey

Some time previous to this I had received a telegram inviting me to be one of ten men to meet for the purpose of considering the advisability of organizing an association and stating: "If you will not be able to attend or send a representative with full authority to act for you, please wire me immediately in order that the invitation may be extended to a substitute as we desire to have an attendance of 10." This was signed by our esteemed friend, Leod D. Becker. I accepted and attended both the preliminary meeting and the following organization meeting and up to a short time ago was continuously active in the affairs of the O.H.I. and its differently named predecessors.

Not only as I look through my file but also in my pleasant memories of the Organization I see your magazine as the silken thread that has run all through the life of our industry despite changes in the name of the organization and in its manner of conducting its business. I am glancing at this moment at the list of the original directors, very few of whom still remain active in the Association. But your magazine has consistently inspired and informed the changing directorate and in my mind is entitled to a large share of the credit for the fine success that has attended it all through the years.

I value beyond measure the friendships which have been engendered during these thirty years and the consistent manner in which your journal —I am almost inclined to say "our journal"—has kept us advised and informed regarding all of the matters which are correlative to our industry. It is delightful to know that the group of men who are now handling FUEL-OIL & OIL HEAT are of the same well informed and friendly nature as has characterized the personnel of the magazine from its start.

We of National Airoil Burner Company make good use of the magazine and enjoy our acquaintance with all of you and sincerely congratulate you upon the standing that you have achieved for yourself in our industry and among trade publications in general.

E. P. BAILEY, *President*

❖

BUCKLEY & SCOTT
Watertown, Mass.

Editor:

So you are celebrating your 30th Anniversary! May I congratulate you and the whole organization and compliment you on the fine job you are doing on the magazine for the Industry and the great service you personally have given. I know everybody feels this way and I deem it a privilege to record it through this letter.

I suppose history will record the years from 1922-52 as ones of greatest impact and change to date.

You request that I give you a story of some incident of the early years of my business experience in the burner business. That's a pretty tough assignment for me; first, it is almost impossible for me to pick one or two incidents, and second, I was born to talk —you were born to write—so take the following facts and with your fine touch, please re-write it if you find it interesting. If not, my feelings will not be hurt if you don't use this material.

I find the question most people want to know about old timers is: "How did you get into the business"? Or, "what made you decide to go into this business"?

Here is the answer on how I got into the business:

I was born on June 19, 1895. I left school at 16, took a job as stock clerk in the New York office of a Scotch Linen Manufacturing Co. I went into the linen business because my Father was in the same business. I moved up to salesman, then City salesman in two years. About this time the dance craze hit this country and very soon I was making more money on the side than from my job at noon, evenings and week-ends working at Churchill's, Irene & Vernon Castle's, Murray's, Rector's, Healey's, etc. The job's best described as a gigolo. This did not set very well with my parents who hoped their boy would be a mechanical engineer like my mother's brother. So I had to make the great decision—break away from the family or give up the dance racket and settle down in some legitimate business. This was now 1915—I was twenty years old.

My decision was to give up the dance game and get away from New York and its temptations for a few months. The papers were filled with ads to visit San Francisco—the World's Fair. I had money in the bank—my mother's brother (the engineer) lived in San Francisco—why not take my mother for a four-month vacation and see the fair and visit my uncle? Which is exactly what we did.

Scott

It was a wonderful experience. During our visit we spent a month in Monte Rio, north of San Francisco, with my uncle and his whole family, swimming, horseback riding, fishing, dancing, play, play, play!

I can never forget that vacation. About two days before leaving my uncle, who was then chief engineer of the Spring Valley Water Works (a private company that supplied water for San Francisco) suggested that I go with him as he had to check the night watch at a few of the pumping stations. Pumping stations or anything else mechanical held absolutely no interest for me, but he had done so much for me during our visit, I went along just to keep him company.

That little ride, starting at 11 P.M. and lasting two hours, changed my whole life. I saw oil being burned as fuel for the first time. Four 300 H.P.

boilers with 275 lbs. of steam pressure being automatically controlled with the "Dawson" regulator (an invention of my uncle's). Only two men in clean work clothes handling this whole operation and two men were not necessary for the operation, but were required for safety reasons by the State.

The only other boiler room that I ever saw at close range was one about the same size at Columbia University, using coal. Twelve to fourteen men in red shirts covered with coal soot, ashes being hauled out, coal dumped in, and everything within a hundred feet covered with grime. What a wonderful thing! Here was the business for me! If my uncle would come East and take care of engineering, I could sell burners and we could build a real business. Never was anyone more enthused about an idea than I was. I never stopped talking while my uncle would listen. The next day I covered the whole field of burners then available—Ray, Johnson, Fess. I collected sales material and all the books available on the subject.

Investigation proved we were a little early. Fueloil in large quantities was not available on the East Coast. I got into the movies and onto the stage, which is another circumstance and contact which is too long to relate here. But this trip to California was responsible for this step in my career.

In 1917 I went to war. I got a letter from my uncle stating he was coming East to install oilburners for the Fess Rotary Oil Burner Co., in the Christian Science Publishing Company's new building in Boston. He had accepted a contract to do this one job—if he liked the East, he would stay. Oil was discovered in Mexico—a low gravity variety which was made available to the East Coast.

He stayed. I went through the war. I got out of the Marine Corps February 12, 1919 and started selling industrial burners in Providence, R. I., on February 13th, for Fess Rotary Oil Burner, which was reorganized as Petroleum Heat and Power Co., in November, 1919. I left them in January, 1920 and started my own business with Al Buckley in February, 1920. This led up to the legend of my carrying the first automatic oil-burner (underwriter approved) into New England, which story I will save for a future installment because this story has been so twisted through many tellings, I would like to set the record straight at some future time.

MANY, MANY HAPPY AND PROSPEROUS RETURNS OF THE DAY.

JOHN W. SCOTT, *President*

LLOYD I. ALDRICH
Wyoming, Ill.

Editor:

Regarding your anniversary number, I undoubtedly have had many experiences in my more than thirty years in this industry that the younger generation would consider extremely funny, and looking back, I can laugh myself but I assure them, we did not consider them so funny at the time.

Aldrich

The oilburning industry is not so young as many think. The first oil I saw burned was in an attachment for a coal burning range, demonstrated by a salesman 62 or 63 years ago. It was not until 1919 during the soft coal shortage that the foundry with which I was connected was called upon to make a few cast iron pot type burners to go into existing heating plants. Little did I think at the time that I would within 2 years become a part of the Industry to the extent that it was to furnish my livelihood during the balance of my life.

Little was known about combustion and those that had that knowledge were not electrically minded nor were they mechanical engineers, and the mechanical engineers knew nothing about combustion and usually little about electrical appliances. Naturally, our first efforts to produce a satisfactory burner were crude but the public were becoming oil minded and we sold our monstrosities and then had the problem of trying to satisfy our customers well enough to enable us to get more customers which was quite a task.

We spent our days in the shop but our nights were usually spent in somebody's basement, putting doors on furnaces or boilers, or even bracing one or both boiler end sections back against the boiler so as to give heat until we could get a repair gang on the job in the morning.

I well remember one instance where I was called at about 11:00 o'clock, after an explosion that blew the boiler front off on top of the burner. The old gentleman who owned the property assumed all of the blame, saying "That is the most wonderful appliance in the world, I keep this chair beside the boiler just to see it operate but I just can't keep my fingers off it. I kept turning it off and on until it blew up."

I must take off my hat to the pioneers of this industry who furnished the capital because few of them ever realized a profit. Most of them lost because they had to maintain schools for training dealers and servicemen, salesmen, and even their own engineers while they experimented.

These men were the real pioneers of the industry and they all dreamed of the day when burners would be perfected and could be marketed in quantity and few of them were able to survive through the experimental stage or until public acceptance enabled sales in volume.

I for one waited until 1935 before making my bid for sales in quantity. My venture on my own was successful and the later generation who were so lucky as to become identified in the industry after the experimental stage can be thankful that the "Old Timers" who gambled and lost and the few that survived had the "guts to TRY," but they missed a lot of fun.

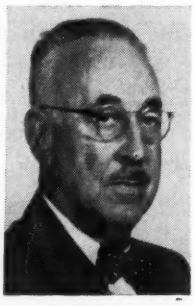
L. I. ALDRICH

LIONEL L. JACOBS & SONS
Wayne, Pa.

Editor:

And so July will be the 30th Anniversary issue. How the years roll by! I well remember the first issue, although I had forgotten the month. I was delighted with it and carried it around in my pocket, showing it to people until it was all worn out. Later

I got another copy from Leod Becker, and still have it. I wrote him congratulating him on filling an urgent need and I shrewdly suspect that letter resulted in my being made Canadian Representative of and a Vice President of the new American Oil Burner Association founded in 1923.



Jacobs

I doubt if many people today realize what an outstanding job FUELOIL did for the Industry in its formative stages. As long as it was of pocket size. I always had a copy in my pocket, and I wrote a "poisonous" letter to Becker when he increased the size. But he was right. As the Industry expanded, more space was needed. The quality of reading matter has kept pace with the growth of the Industry and has been particularly good in the last five years. If ever a Trade Journal were a MUST, FUELOIL is so. I still grab each month's copy as eagerly as I did thirty years ago.

In 1922 we had quite a serious coal strike. What that particular strike did to put the young oilburner industry on its feet was amazing. I was in Montreal at the time, the Manager of Fess Oil Burners of Canada branch there, and by the early part of 1923 had sold practically every Catholic Church in the City. You can guess how that brought in the Competitors.

In spite of "gas" and Doc. Wilson, I'm planning for another thirty years of prosperity in the Industry, and invite you to come along.

LIONEL L. JACOBS

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WEBSTER ELECTRIC COMPANY
Racine, Wisconsin

Editor:

I want very much to be one of the many who will congratulate you on the 30th anniversary issue of FUELOIL & OIL HEAT. Your magazine has spanned a period of development in the oilheating industry that has brought about many important improvements in the design and performance of oilheating equipment. During that same period, your magazine has kept pace in its service to the industry as a source of information, both technical and economic, and you do indeed deserve commendation.

This occasion, of course, reminds me of our own early beginnings in the oilburner field, and the many problems and disappointments which we faced in those days. Since then, the industry has grown tremendously, and we have made many new friends, but we still remember with a special warmth that small group of manufacturers with whom we made our beginnings.

We have great faith in the future growth of the oil-heating industry and hope that you and your organization will continue to grow and prosper with it.

S. ARTHUR LOEB, *Board Chairman*

Loeb

Sweatt

MINNEAPOLIS-HONEYWELL REGULATOR CO.
Minneapolis

Editor:

I have just been advised that you are going to have the Thirtieth Anniversary issue of FUELOIL.

This brings to mind the early days of the industry, and I remember very well the first issue of this magazine. Over the thirty years certainly many changes have come—both to the industry and the magazine, and I should think that your organization would be very proud of their part of the job that has been done in making oilheating one of the major industries in the country . . . just as the rest of us who have been associated with it since the early days also have pride in our part of these programs.

HAROLD W. SWEATT, *President*

CHARLES B. BENDIX
Chicago 36, Ill.

Editor:

The 30th Anniversary of your Publication brings forth many a fond memory of the past years. The value of a Trade Magazine is, of course, unquestionable, particularly if operated in the fashion yours has been.

Never during these thirty years have I heard a really critical remark passed in judgment of the Magazine, or the many men that have been associated with it in one way or the other. Have always felt a great pride in having been on close terms with most of the associates of the Magazine.

The struggle of the Oil Heating Industry since the early twenties has been yours. Both the industry and you can be mighty proud of the record. Without doubt, the magazine has been a majestic figure and a supporting pillar to carry on, in the original stages, the missionary work, and later the faithfulness during the depression years, and so at last, to the more comforting years of the late forties which saw real volume within the Industry.

Having received my baptism with Passino, Dealer in Jersey City, N. J., during the fall of the year 1922 as service engineer and later associated with Eddie Wohlfharth and his Oil Heating Corporation of New Jersey, I launched a dealership of oilburners in the then largest Incorporated Village, Freeport, Long Island, N. Y.

During the early stages in Nassau County, there were several incidents, that come to my memory at this time and which linger to serve as proof of the value of collective efforts offered through your magazine.

Much activity by coal merchants of the early years of 1924, 1925 and 1926 was felt through their efforts to pass some Ordinances in the small towns and villages, which nearly prevented the sale and installation of oilburners.

The village shall go nameless, but, it was one of the smaller ones, where the Mogul of the neighborhood — a coal merchant—was also the Mayor. Information had reached me that at a certain evening board meeting an Ordinance was to be introduced,

which incorporated the following wording: "no mechanical operated equipment shall be attached, connected or installed in conjunction with a natural draft chimney or stack or through a heating unit so connected."

Needless to say, six men inclusive of your magazine representative showed up at that meeting. We were successful in introducing in opposition "The Ordinance & Code Covering the Installation of Oil Heating Equipment." It was later passed as it was in every town in Nassau and Suffolk counties.

All of this, is recorded in the Minutes of the Meetings of the OHALI (Oil Heat Association of Long Island), which was chartered and aided by your magazine. During the 8 years that the writer served as its President your magazine continued active support and together it is my belief that we had one of the most progressive territories in oilheating in the United States.

The book containing the Minutes of the Meetings of the OHALI during these years is on display in the Museum started a few years ago in Long Island City. Any Old Timer will get a kick when scanning through it.

It is with gratitude and respect that I offer my sincere and hearty congratulations on your 30th Anniversary.

CHARLES B. BENDIX

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OIL ADVISORS, INC.
New York 16, N. Y.

Editor:

The first oilburner that I ever came in contact with was in 1921. It was installed in the home of a friend in Ridley Park, Pa., near Philadelphia. We were all going out to a big "shindig" that night, all dressed up in stiff shirts, white tie and all the trimmings. We stopped at his home for a "quickie" before leaving for the main party. I heard a rumbling sound coming from the cellar door, which was open, and upon inquiring about the said noise, my host came up with this astounding answer: "Boy, no more coal shoveling for me. Bought a Vulcan oilburner yesterday for $135 and installed it myself. It is a honey." Just about that time the sound stopped. He said "Wait a minute, my oilburner has gone out. I'll go downstairs and relight it." He did, and shortly we heard an ominous muffled explosion coming from the cellar door, which had been left open.

Whitney

Shortly thereafter my host appeared looking like an end man in Lou Dockstader's Minstrel Show. He was covered with black soot from the top of his head to about waist high. His stiff white shirt bore the main brunt of the explosion and was solid black. His wife scrubbed for an hour and we finally decided we could get just as pie-eyed staying home as going to the party. He had no spare suit of armor, so we stayed home and called his oilburner every name in the cussers vocabulary, as he brought on more drinks.

I was a young mechanical engineer employed by the Westinghouse Electric and Mfg. Co. at the time and, even then, I became intrigued with the idea of automatic oilburning. Six years later I was in the industry for good. What a lamb for the shearing! Little did I know what I was getting into at the time, nor how much fun I was going to have out of a brand new business and a brand new industry.

Among other prospects, in 1926 I called on a wealthy corporation president in the good old city of Brotherly Love, Philadelphia, Pa. I had learned through the grapevine that this gentleman was going to build a new home and we very much wanted him as a user for his name value, so we could "use the user." We were willing to sell the burner at cost, if we could have him as a user. We didn't know what our cost was, anyway. I was finally able to get into his beautifully appointed office for an interview. This austere, wealthy, well educated Quaker gentleman informed me that he was considering four kinds of heat for his new home namely, and I quote "hot water heat, steam heat, hot air heat and last, but not least, *oil heat*." Unquote. It took quite a bit of unscrambling to get this boy's mind straightened out as to the application of oil heat to hot water, steam and hot air. He was educated, too, but not in oil heat. Finally obtained his permission to call at his home that evening to talk to and convince the "little woman." His good wife promptly told me she was afraid of the "hot oil" leaking out of the radiators on her beautiful floors. Boy, that one really took all my capacity as a salesman. However, persistence or ignorance won. I don't know which.

Came the day, however, when the house was built, the burner was installed and the man was to live in the house with a 10" pot type "Nokol" oilburner right under his bedroom. I had told him that for what he would ordinarily pay for hard coal and hard work, we would give him "Nokol" and no work. Quite a "quitogram" for those good old days.

I promptly called the next morning to canvass the neighborhood for prospects. Then I would put my drive on of "use the user" and with this gentleman's name and influence sales by the dozens would fall into my lap. Upon calling on the neighbors I found that people on both sides had stayed up practically all night waiting for the oilburner to "blow up" and burn down the neighborhood. They were unconvinced and would wait for a year to see how things turned out.

Strange to say, they were right in their prognostications. Ten days later, the old 10" pot-type burner decided it didn't like its new environment and let go with a bang that darn near shook the neighborhood and wrecked part of the cellar furnishings in this new home. The whole heating plant moved over about 6 inches. I had sold the man every nut and bolt on the oilburner, sold him on this "safe" way of burning oil, and sold him on the dependability of the house. He now called on me to make good on this "dependability." The "house itself" was on the verge of bankruptcy. No wonder.

Sounds funny now, but think of the strides we have made since those good old days. We were really pioneering

a product in those days, and how. The salesmen of America have given their life's blood to introduce and sell new products causing whole industries to come into being, employing millions of people. I have never regretted the "blood" I have given to the cause of selling, which was my small infinitesimal part in making this country the best in the world. I wish I could do it all over again. It was fun.

CHARLES W. WHITNEY, *President*

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BREESE BURNERS, INC.
Santa Fe, N. M.

Editor:

In the early days when we first started installing oil heat we were always up against the question of cost of oil versus coal. I forget the exact figures or the prices in those days, but I do remember that there was a very narrow margin. In many cases it was obviously cheaper to heat with coal and in others there were considerable savings shown using oil and thermostatic control.

In those days people were used to having their houses a little on the cold side in zero weather, but when we started placing thermostats in the houses their point of view changed. As soon as a good, cold, subzero day would come along, they would make an immediate rush to the thermostat and see if the temperature was up to 70. Obviously, if the burner had been set high enough the house would be kept at 70, but by the same token their fuel bill would be excessive as compared to coal.

When called on the carpet we would look very engineering-wise, go over the entire house, make notes and finally come out with the conclusion that the thermostat had been placed so low on the wall that we were afraid that it had been manipulated by the children.

This usually seemed reasonable to the housewife and we often got the suggestion from her, "Would it do any harm to put it up out of their reach?" At that we looked surprised and complimented her on the startlingly wise suggestion, and thereupon moved the thermostat up a foot or more from its old position.

We didn't tell her, of course, that at the elevated position the temperature was higher possibly by a degree or more, nor did we call her attention to the fact that as she viewed the thermometer on the thermostat from a position of a foot or more above her eye level that the line of sight over the meniscus made the thermometer read again a couple of degrees higher. All in all we gained four or five degrees and before we left the house we suggested that she check the thermostat occasionally and be sure the temperature was not over 70 on the thermostat thermometer.

I have noticed in several recent advertisements that the control industry is recommending a position three or four feet from the floor. This may be good engineering but as good psychology it's at least debatable. The old timers, I feel sure, would take the negative.

It has been fun writing this letter to recall many of the amusing situations and how they were handled by some of the smart servicemen 25 years ago.

JAMES L. BREESE

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CITIES SERVICE PETROLEUM, INC.
New York

Editor:

Congratulations to the men and women who have published FUELOIL & OIL HEAT for thirty years. You deserve the thanks of millions of users of oil heat and the thousands who are engaged in the business.

I recall the courage you demonstrated when you began publication. The tests of public's interest in automatic heating had just convinced Mr. Henry L. Doherty in 1921 that a demand could be cultivated to commercial proportions.

He was proud indeed when you reported his address to the National Petroleum Association in Atlantic City on September 20, 1923. You were one of the few who supported his contention that oil would replace coal in the public's favor for home heating.

Later that year you backed up his prediction to the American Petroleum Institute in St. Louis on December 11 that oilheating would add a billion dollars a year to the industry's revenue.

White

Looking backward thirty years your readers will credit you with remarkable foresight. As they look forward for thirty years they welcome your staunch belief in the future of the industry and the great strength which you always bring in times of trouble.

FUELOIL & OIL HEAT means many things to many people. You give understanding and appreciation which encourages men to engage in the oil heating enterprise.

Your columns told them how to proceed as you explained the successful methods of others. You have provided a meeting place where suppliers of equipment could meet buyers. Your painstaking tabulations of oilburners installed and their demands for products have been of great value to consumers and the industry.

Now, as you enter your next period of growth I want you to know that you have the friendship and the affection of everyone who reads your words or meets you in person.

When the oil industry begins to award "Oscars" you will be my first nomination.

L. T. WHITE

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PREFERRED UTILITIES MANUFACTURING CORP.
New York

Editor:

It seems to me that your magazine was born at just the right time. While the burning of oil was not new in 1922, it, nevertheless, was crystallizing into a business that had reasonable assurance of a big future. America, prior to 1922, had almost settled down to the belief that coal was the major fuel for heat and power.

Early in this century inventors had experimented with different methods of burning the by-products of crude oil refining. In 1922, and even much later, fueloil, or anything heavier

than kerosene, was a drug on the market so far as the oil companies were concerned. To the inventor it looked like a wonderful opportunity to capitalize on a cheap fuel, which inherently had a lot of advantages over solid fuel.

Bohn

The heatless Mondays of World War I awakened a lot of other inventive geniuses, as well as crystal gazers, to the possibilities of developing automatic oilburning for heat and power. While World War I was not as dependent upon petroleum as World War II, nevertheless, the motorizing of the Army, the expansion of the Navy and the use of Airplanes in war all pointed to a petroleum world, with America in the lead.

Therefore, in 1922, with the beginning of a boom in this country, and in the world, the permanency of fueloil for heat and power was assured, at least in the minds of the inventors and promoters of oil burning equipment.

There were, however, two necessary contributors to the real success and final development of satisfactory oil heat and power that lagged for some time in their appreciation of the future of oil burning. They were the boiler and furnace manufacturers, and the producers of oil.

In 1922 few ever thought of designing a boiler or furnace to capitalize the maximum thermal efficiencies of oilburning, or even design them to conform to the inherent combustion of this fuel. Contrarywise, it was the oilburner man's business to adapt his invention to fit the coalburning heat exchanger.

The oil companies were even slower in seeing the future. They seemingly would not use a crystal ball at all. They approached the problem from a day-to-day position, even though fueloil was beginning to "run out of their ears" and many refineries were literally giving it away to any transportation facility that would take it off their hands. The supply was greater than the demand for the by-product. Fueloil was being tankered from the west coast to the east coast and glutting the market to where thousands of tons were dumped in the ocean and the tanker sent back to California in hopes that by the next trip east a customer could be found.

This was in 1922, — and it took many years of hard work on the part of the oilburner man to make the public and the oil companies see what he had seen in his crystal ball.

Gradually, the combined efforts of all the enthusiasts proved their picture; the public was convinced; by-products of oil refining finally became products; the oil companies started to make profits on what were once loss by-products, and the future of fueloil for heat and power became a big part of our country's economy.

We have spoken of the inventors prior to and around 1922, but we have said little of the promoters. The promoters who preached the gospel that oil heat was better heat, prior to 1922, fought a losing battle in most cases so far as self-existence was concerned, but in 1922 the promoters who were still with us and continued to carry the banner, have lived to see, in most instances, their dreams come true, and if not always over-prosperous, at least satisfied in knowing that they were right in contributing to the comfort, cleanliness and convenience enjoyed by millions of people. These promoters have earned their just reward in the satisfaction of giving better heat to humanity.

FUELOIL FOR HEAT & POWER, the name of your journal at that time, has earned its credit in this promotional activity and should likewise be justly proud in the part it has played in this great crusade.

R. S. BOHN

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HAN A. KUNITZ
Jackson Heights, N. Y.

Editor:

Looking back to the old days of thirty years ago which brought us FUELOIL naturally brings to mind a number of incidents, most of them shedding light on the difference between things then and now. Perhaps the biggest difference is that between the amount of knowledge we had, and have now. We have learned a lot—which is paramount to saying that we had a lot to learn.

Salesman Eddie X and the P.A., for instance.

One morning, I went to pay a visit to our purchasing agent on some routine matter. There was someone with him, and I was asked to sit down a minute. The P.A. was impersonally busy filling out a pad before him.

"And how about the quality of this oil," he asked, after reading the next line on his pad.

"It is the best to be had," salesman Eddie solemnly assured.

"How many B.t.u. in it?" the P.A. wanted to know.

Eddie looked up the walls and into the room corners for inspiration, and apparently found it:

"Mister, I'd give you a dime for every B.t.u. you find in our oil," he proudly asserted.

The P.A. nodded, made a note on his pad and proceeded evenly to the next question. I know that the P.A. picked up a few points since then. As to Eddie, whether he got himself a subscription to FUELOIL and learned, I don't know.

Sometimes scanty knowledge would be a help rather than a handicap. I remember having lunch once with B, a NoKol salesman, at the Delaware and Lackawanna Station in Jersey City. That was a favorite place with me for its fine view of New York Harbor, (before it was hidden back of docks and warehouses).

"Kunitz," said B, who then was making a good record of sales for himself, "you ought to be selling burners yourself. With the information you have, I bet it would be a cinch."

I was doubtful. "Suppose the captain of that ferry just pulling in came up here and stopped at our table to ask me about a burner for his ship. What would I say? I'd hesitate, might want to prepare him to add six feet to his stack, and Heavens knows what else! His interest would flag, and he'd walk away, saying 'I'll think it over.'

"But if he had asked you instead, you'd doubt nothing, you'd be for it and say 'sure, when do we start?'

(*Please turn to page* 148)

Remember the early Burners?

Good Performance of many Types of Burners built up oilheating Acceptance

by

J. W. Schulz

RECENTLY I WATCHED a row of spanking new homes in a Long Island development being taken over by their thrilled new owners. Pretty as a picture, the homes had been completed the day before. Now on a crisp spring morning sparkling with sunshine more than a dozen families had driven up in their cars to take over and move in. As busy as the moving-van men were, again and again they had to stop work and move their vans. Why? Three shining big fueloil trucks had to deliver oil to make these homes livable.

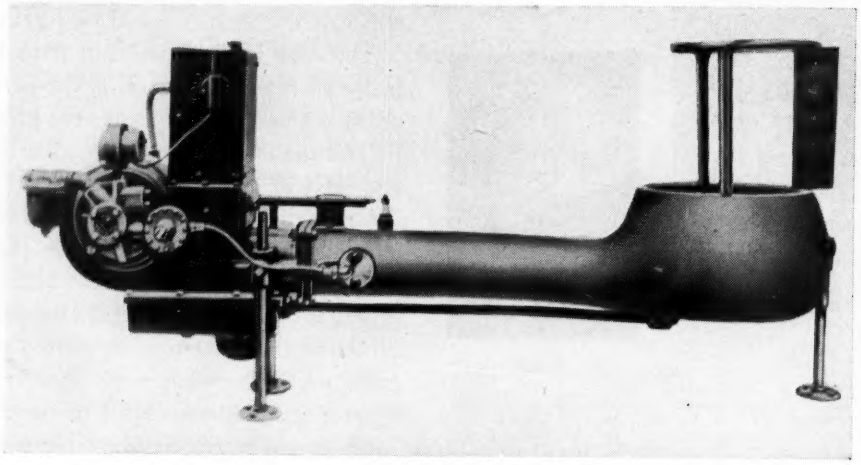
Here as in many other parts of the country, turning an empty new house into a home depends on the arrival of the family, the moving van, and the fueloil truck. Thus has oil heating become part of the American family scene.

There's an enormous industry engaged in producing all the varied equipment related to oil heating. There's an enormous industry producing and distributing the fueloil needed to heat American homes. The millions of Americans served by these two industries think in terms of oil heating. To them, oil heating is a practically indispensable part of the home life they know and enjoy.

All this has come of the growth of the domestic oilburner in the course of some 30 years. Plainly and simply, there could be no oil heating without the oilburner itself.

The lowly oilburner of 30 years ago had little to impress the casual observer who saw it running in a basement. It was far from beautiful. To its inventor, it might have seemed wonderful when it was working properly. But sometimes it started with jerks and jolts, displayed its temper or temperament, or just plain broke down.

The burner of 30 years ago did its best only after a fanatical service man had determined to learn the idiosyncrasies of the particular make and model. It had to be pampered and encouraged in a determined way to keep it running properly.



Model H Electrol, *made in 1918 and reputed to be the first electric-ignition oilburner, using a K-W ignition coil and a Champion spark plug with special 2" spark points. This model H preceded the model S, which featured in-the-door firing. A few years later came Electrol's model T, a classic mentioned in the text of this article.*

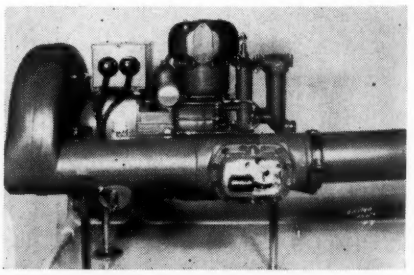
To gain an idea of the domestic oilburner of 1922, read this paragraph from the September, 1922 issue of FUELOIL magazine:

"The system of handling oil in connection with a well designed oil burner is identical with that used in the best grade automobiles. A standard vacuum tank is installed a few feet above the burner and a vacuum pump connected with the motor keeps this small vacuum tank filling with oil. The main supply tank is removed from the building and buried in the ground where it is easy for the oil service men to fill direct from a tank wagon. This system of handling oils reduces the fire hazard to minimum and also gives the house owner extra space in the basement which would be otherwise used by a tank."

The author obviously is thinking in terms of a pot type, vaporizing burner having a forced-air blower and a piston-type vacuum pump that runs continuously, being motor-driven, because perhaps every ten minutes a Stewart-Warner vacuum tank needs vacuum for a few seconds to draw oil from the outside tank.

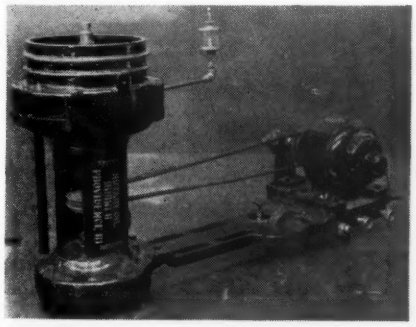
In 1922 a burner designer did nothing unusual in equipping his burner with a motor-driven piston-type vacuum pump and using a Stewart-Warner vacuum tank instead of adding a simple oil pump to the burner. In 1922 adding an oil pump to a burner was not as simple as it is today.

At that time, in many parts of the country oilburner specialists handling honest-to-goodness power burners (burners having electric motors that

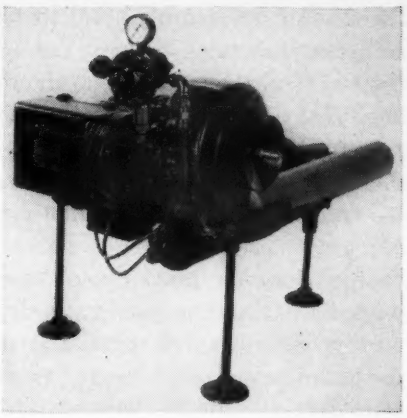


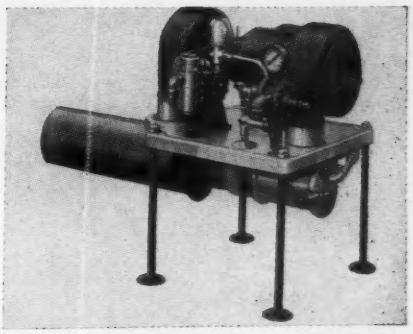
On the heels *of the model G Williams Oil-O-Matic came this model J, boasting a "Hushed Heat Assembly," shown on the side of the gun tube. It's a float valve arrangement that changed the Oil-O-Matic from a froth-to-nozzle burner to one having two lines to the nozzle, one for low pressure atomizing air, the other for the oil to-be-burned.*

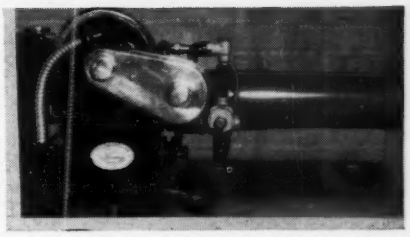
at least drove blowers) were starting to set up dealer organizations. Many of these specialists concentrated on selling burner installations to wealthy owners of large homes. One such man said later that he sold such large fuel-oil storage tanks that in effect he was selling oil tanks and giving away burners to go with them. He'd insist that a home needed a tank large enough to go through an entire heating season on one filling, because an oil truck might not be able to get through the ice and snow in winter. Few of his large-home jobs had tanks smaller than 3,000 gallon size. Many had 5,000 gallon tanks and a few had 10,000 gallon tanks. In the early twenties he sold a burner that had a ¼ horsepower motor but no oil pump to draw oil from an outside tank, so he borrowed an idea from shipboard oilburning practice and installed on each outside-tank job what he called a "day tank." This was a 55-gallon drum arranged to give the burner oil by gravity. To fill the "day tank," the home owner, his house man, butler, or chauffeur would go down the basement and for five or ten minutes spin the crank of a hand-operated oil pump that sucked in oil from the outside tank. Many of these jobs had 1¼" suction lines for their hand pumps. The "day tank" had no oil gage, but after a smart man got used to cranking the hand pump, he could tell when the "day tank" got full and oil started to return to the outside tank through an overflow line that was provided for safety.



This burner, *dug out from our archives and sold about 1912, is marked "Early Aetna oilburner" but the casting is marked "Rotary Oil Burner, Providence." That may be confusing, but certainly this is a belt-drive type of atomizing vertical rotary, with a sight-glass type lubricator.*







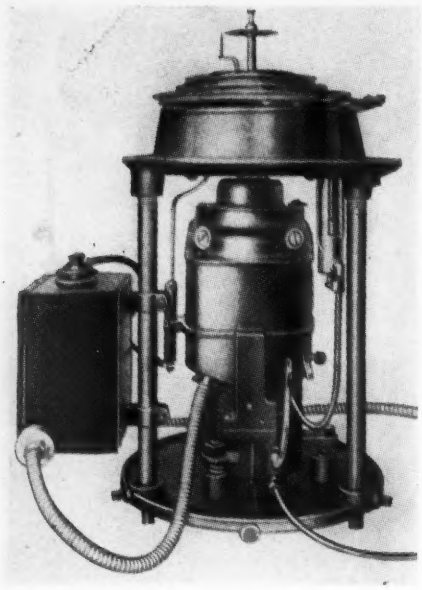
These three burners *represent the belt-drive era of pressure burners, popular in the late 20's and early 30's. They had component parts identical to pressure burners today, except that they used belt instead of direct drives for the oil pumps. The fuel unit had not appeared yet. The burner above is the famous model 800 Kleen-Heet, with a M-H Protectorelay control panel mounted on the burner. The model T D'Elia is shown to the right, top picture; below it is a Nu-Way burner, described as a model that had been designed especially for home heating applications.*

The heyday of pot type burners, of the conversion type of course, came in the early 1920's. In many cities where oilburners were becoming popular, a man had to know all about the Kleen-Heet, McIlvaine, Nokol, and Northern pot-type conversion burners, for example, to rate as a burner expert. The modern pot burner of those days was likely to boast of its motor-driven blower, bucket safety device, and gas pilot or oil pilot. These old pot burners needed fairly clean fueloil that was light and easy to burn completely, and the dealers who sold them were taunted about this by dealers handling certain other types of burners that allegedly could use heavier, cheaper oils.

Today, the best makes and models of pot burners made in the early 1920's can be considered as classics, for they were well engineered and performed in an outstanding fashion. Many remained in use for years and years, and gave excellent, nearly-noiseless heating without trouble to speak of. All-in-all, the pot burner of the conversion type did much in the early days of oil heating to convince home owners that oil was an excellent fuel for house heating.

Atomizing vertical rotary burners played a great part in the early days of automatic oilburners. The flames of these were similar in general, but the design and construction of the different makes of burners were tremendously different as if to suggest that here was the type burner a rugged individualist should build to prove he was no copy-cat. Spinning nozzles or atomizing plates or cups were located in the combustion space above refractory hearths or fireboxes that usually were bowl-shaped, and were driven by vertical shafts at speeds all the way from 1150 rpm to 10,000 rpm. Widely different electric motor arrangements were used to drive these spinning nozzles, plates, and cups. Some burners had horizontal-shaft motors located in the ashpits, others had similar motors located outside the ashpits and coupled to long drive shafts, while still others had vertical-shaft, direct-drive motors located in the ashpits. Some of these burners had integral oil pumps, while others had no pumps and had to be gravity-fed. Widely different kinds of safety devices were used for these early burners. Some of these burners had forced-draft blowers; others had none and depended entirely on natural draft.

Well known in certain areas during the 1920's were the atomizing vertical rotary burners sold under the names of ABC, Aetna, Hardinge,



Just to prove *an atomizing vertical rotary burner need not be similar to others, this "Model G Super Automatic Oil Heator with Electric Ignition" features a low pressure atomizing pump, an oil froth sent to the nozzle and a motor-driven spinning nozzle. On top of that, it has straight electric, jump-spark ignition and works entirely by chimney draft. Came out in the late twenties.*

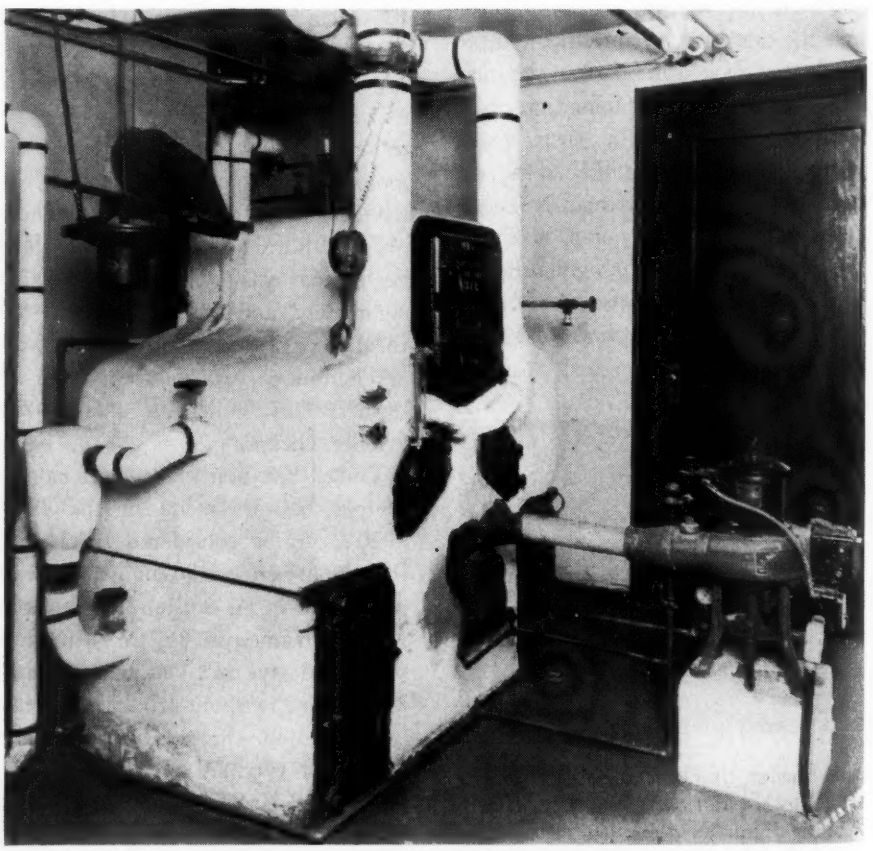
Super Oil Heator, and United States. After 1925 had rolled by, the advantages of electric, jump-spark ignition started to make a great impression on oilburner enthusiasts, and in the field of atomizing vertical rotary burners great efforts were made by certain manufacturers to replace their gas ignition systems with jump-spark ignition systems. To the great distress of many dealers and service men, not every burner of this type that was equipped with electric ignition worked out to be practical on actual installations. Even today, a manufacturer can be particularly proud to offer atomizing vertical rotary burners equipped with electric ignition, without also offering gas pilot models and whispering to dealers that these are more dependable.

The old atomizing vertical rotary burners did particularly well at handling the heavier domestic fueloils. In truth, several makes and models had exceptional atomizing ability together with relatively little tendency to clog when using fueloils troubled with sediment. Certain dealers and many owners got to boasting that these burners ran satisfactorily using 100% crankcase drainings or mixtures of domestic fueloil and crankcase drainings. The performance of such burners served to spur on other burner enthusiasts to improve the type burners they preferred, in the direction of satisfactory operation using thicker, cheaper fueloils. In this and other ways, the old atomizing vertical rotary burners contributed a great deal to the advancement of oil heating in its early days.

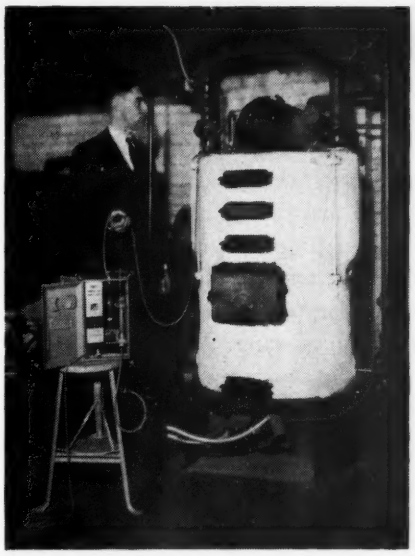
The other type of vertical rotary burner, the wall flame rotary, had its start in the 1920's, early in the days of widespread use of oilburners. The Silent Automatic, now a classic, made history with its outstanding engineering and topnotch performance. Many of the early Silent Automatic dealers set new records for the size of their organizations as well as their competence at widescale sales, installation, and service operations.

Wall pumps became widely used as wall flame rotaries became more and more popular, because then as now this type burner had no integral oil pump. The old Cook, Monroe, and Teesdale wall pumps were well known in the oil heating industry. A favorite of many men in the industry today, the Teesdale Type TU wall pump started gaining its fame before 1930! Moreover, the design and construction of 1930 and 1952 are startingly similar!

Gas was used for ignition of the first wall flame rotaries, and it worked out splendidly on thousands and thousands of installations. Despite this, in the early 1930's the wall flame rotary enthusiasts saw the light and recognized the great advantages of electric ignition. For one thing, it permitted selling burners in neighborhoods and rural sections that had no piped gas available for oilburner ignition systems. As a second advantage, it eliminated the need for a dealer to run a costly gas line to an oilburner. Third, it was modern; up-and-coming oilburners were screaming



This Wayne burner, *the darling of many dealers and service men in the old days, is shown installed to convert this hopper-type steam boiler to oil. Notice the burner's complicated firing head, the program motor to control it, the vertical shaft motor and the pressure gauge.*



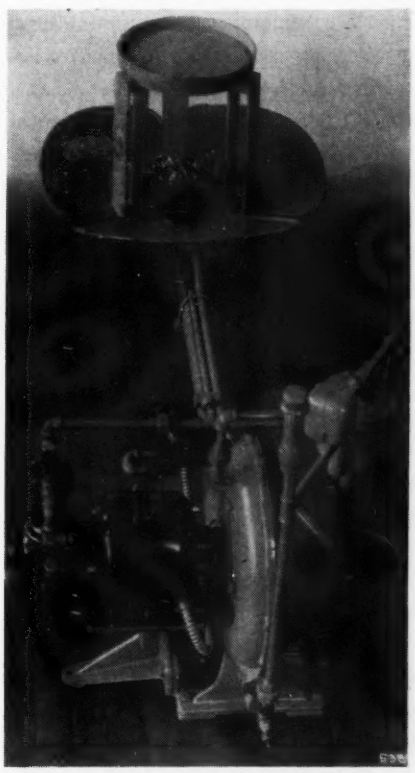
A Hays *complete combustion test set, widely used in the late 20's and early 30's. Such instruments were responsible for teaching thousands of dealers and service men all they knew of combustion engineering and led to tremendously improved combustion efficiencies for oilburner installations.*

their brand-new advantage of all-electric ignition, no gas needed.

Urgent as seemed the need to provide wall flame rotaries with all-electric ignition systems, progress in this direction was slow at first. The burners of this type made in the early 1930's did not adapt easily to electric ignition. Exhaustive efforts were made to use different types of electric ignition on these burners. Hot-wire and carbon-rod arrangements that now seem weird were tried. Finally, and to the great credit of the development men and engineers behind these efforts, the jump-spark ignition system now used as standard for wall flame burners was developed and perfected.

The wall flame burner became well standardized as well as highly refined and highly developed, and soon it reached the high level of performance now found in Fluid Heat, Toridheet, and Timken installations. Throughout the years, however, the basic combustion aspects of the wall flame itself have not changed. The quality of the combustion on an old Silent Automatic installation was truly excellent. The combustion was similarly excellent where other makes of early wall flame rotaries were used. It was true and still is true that the flame given by a wall flame burner is efficient when it is of the proper appearance. Of course, there's a great advantage in having the flame tell you by its appearance whether or not it is healthy and efficient. Great changes have occurred in oil heating equipment during the past 20 to 30 years, but the excellent, distinctive flame of the wall flame burner has not changed. Much of the public acceptance that has been gained during the past 20 years is directly due to the smooth-starting, quiet-running, dependable wall flame burner and its characteristically high efficiencies.

Horizontal rotary cup burners, though used relatively rarely today for small domestic installations, did their part to make a good reputation for domestic oil heating in its early years. In the northeastern states for example, years ago when oil heating was getting its start many exceedingly large homes were converted to oil; Enterprise, Ray, S. T. Johnson, and other makes of rotary cup burners were installed in many of these homes and by virtue of their excellent design and rugged construction provided excellent oil heating. In the late 1920's,



There's *a clover-leaf motif to this early Chalmers burner, which incorporated forced draft and an improved bucket safety device. This particular burner was introduced about 1920.*

Kelvinator *once boasted of this in-the-door model, offered with manually-set dial controls as well as with automatic room thermostats. This type of burner did not survive in a big way.*

S. T. Johnson brought out its Type-B Johnson Cub model, small, easy to install, and described as "designed for homes from five to twelve rooms." Also in the late 1920's, Petro brought out its unique "Residence OilBurner" which had a 3500 rpm motor and blower, a high-speed air-driven atomizing cup, gas-electric ignition, and an integral oil pump driven by a worm-gear speed-reduction arrangement. Some years later, still persisting in offering horizontal rotary cup burners especially designed for even small homes, Petro brought out its "Model W Petro & Nokol" which became widely known in many areas.

The operation of the horizontal rotary burners in many homes helped convince American home owners that oilburners are 100% practical, for to be fair in discussing burners you've got to chalk up ruggedness, dependability, and clog-free operation as the outstanding characteristics of the rotary cup burners. The widespread use of this type of burner on commercial and industrial installations also helped make the American public oil-heat minded in general, and thus advanced the heating of homes by oil. Many a home owner undecided at first about installing an oilburner finally made up his mind after reasoning that if oil was the best fuel for the biggest buildings in town, it must

(*Please turn to page* 156)

Ramblings of a smoke Doctor

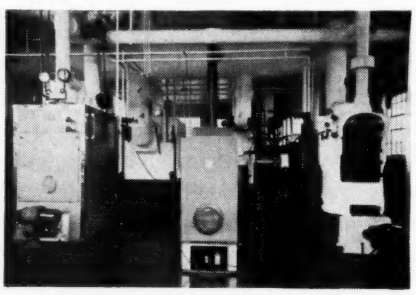
Some Experiences in a major company Lab, going back to the Twenties

by
L. H. Ventres*

WHEN THE EDITOR CALLED up the other day and asked for a few reminiscenses of the early days of burner and fueloil testing he surely started a train of thought. It is so seldom that our thoughts turn back so far and then only when by chance one comes across a photograph in an old magazine or resurrects the extra copy of an ancient report long buried in a desk drawer. As you try to recall each face by name you are pleasantly surprised to realize how many of the "old timers" are still with us and how quickly the intervening years have slipped away. Under such circumstances pleasant thoughts begin to flow and it is not too hard to lose one's self in reveries and to enjoy a sense of pride which goes with association and progress in two great industries.

As our mind's eye travels back to the late 20's and early 30's we see several burner manufacturers who were laying a good solid foundation on which their organization stands today. These were the men who made cooperative research possible by recognizing the need for joint endeavor and then doing something about it. Our role in this undertaking was to check burner performance with various grades of fueloil, determine efficiencies, and ferret out the weak and strong points of both burner and fuel; thus the burners and fuels improved together. Most of the thoughts for the future were rather obscure and quickly lost in a maze of pressing problems of which there seemed to be an unlimited number. One can hardly find a single piece of equipment which goes to make up an oilburner today that did not undergo early improvement and which has not been constantly improved upon as the years have gone by. As a result, an oilburner is now a rugged, durable, dependable piece of equipment, no longer a luxury as in the early days but a necessity in our modern existence.

It is only natural that some particular part of a burner stands out more clearly than others in a person's recollection, probably because of some particular instance of what has been so aptly referred to as "the obstinancy of inanimate objects." The atomizing nozzle is a good example of a burner part which has been improved tremendously since the early days. It is not difficult to recall when hours upon hours had to be spent changing nozzles to find one which would produce anything but a long, lop-sided, stringy fire. We remember with amusement the time a disgusted service man who had encountered an unusually ornery nozzle tossed it out the window with the remark, "That's not an atomizer, that's a sprinkler." A sprinkler no longer fills the bill; good atomization and a spray with a definite pattern, one compatible with a given air delivery, are essential today.



The duty of those employed in this laboratory over the past 22 years has been to test and evaluate the performance of various products in the home heating field as they became available. In the course of this work we have been afforded a sort of grandstand seat from which to review the progress from year to year.

In the early days quality of fueloil was controlled by comparatively few laboratory tests, some of which were intended primarily for other products and thus only remotely tied in with actual burner performance. Experimentation showed, for example, that the 10 per cent distillation point was a far better criterion of ignition characteristics than flash point. It was found that carbon residue determined on the 10 per cent bottoms gave a much better indication of the amount of carbon which might be expected to form in a range burner or on the vaporizing surface of a vertical rotary burner than did the distillation end point of the fuel.

In those days we were particularly interested in overcoming carbon formation on the clay hearth segments of rotary wall-flame burners. These segments were slow in reaching a temperature at which the oil would vaporize completely and thus were conducive to "puddling" or starting (which often let to "panting" and "snuffing out"), in addition to excessive build-up of carbon with the oils which were available at that time. We have the introduction of steel flame rim to thank for the solution of this problem. The steel rim with its rapid temperature rise greatly improved starting and made it possible to reduce carbon formation—formerly as much as 50 or 75 grams obtained in a single 50-gallon test run on the clay rim—to a negligible 2 or 3 grams on the same fuel when the steel rim was used. This is a striking example of the outstanding improvements in wall flame burner design since the early days.

Other equally important developments have been made all along the line. It is only when you look back and compare the early low pressure burners, which were left on our doorstep, with the sleek new models of today that you can begin to realize the advancements that have been made in this field. How simple it all seems now after the problems have been worked out and the answers and proof are down in black and white! So few people realize that weeks and sometimes months were required for a single full scale test run and that hundreds of gallons of oil might be required for each test. Yet full scale tests had to be run in great numbers in order to correlate a small scale test which could be trusted to predict actual perform-

*Combustion laboratory, Shell Development Co., Sewaren, N. J.

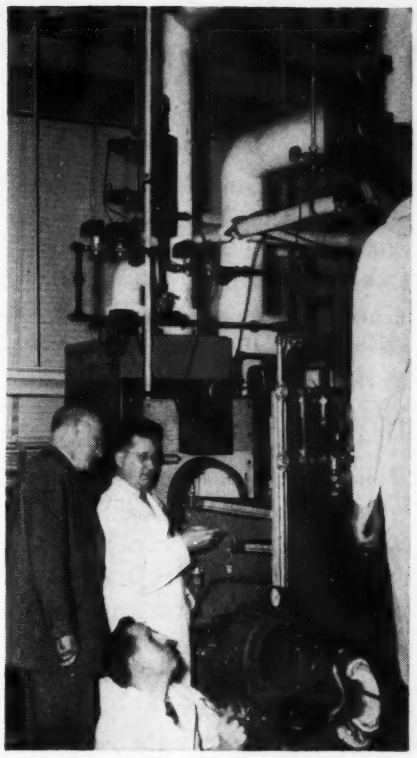
ance. Even then there remained the more time-consuming proof of field testing before the laboratory test could be given final acceptance.

Strainer clogging, which was an ever present source of service calls, reared its ugly head more and more frequently as the demand for distillate heating oils steadily grew and the use of greater portions of thermally cracked fuels became necessary. The early screen clogging tests required a sample of two hundred and fifty gallons of oil and took ninety-six hours to run. The time was later cut to forty-eight hours; but the test was still bulky and time-consuming. Nevertheless, it was the best available test and served for many years. It seemed that it just wasn't possible to manufacture an oil containing large percentages of cracked components which would not sooner or later show signs of clogging.

Then came the completion of a small scale test which required only one gallon of oil and could be run in thirty minutes. Hand-in-hand with this came the development of our fuel-oil additive, FOA-5X. This banished strainer clogging and greatly reduced service calls.

Catalytic cracking was a refinery development with far reaching effects. It enabled the oil industry to produce more high octane aviation and motor fuel base stock for World War II. Cat-cracked fueloil was also considered to be of premium quality in many respects, but it had one drawback. It was more difficult to burn with a clean flame than pre-war fuels. The necessity of determining what was required to burn this oil properly led to the development of the "Shell Head" and, at the same time, the Shell-Bacharach smoke meter.

The head is an arrangement of air-directing parts which gives a very intimate mixing of oil and air, resulting in clean combustion and high CO_2 content in the flue gases, regardless of the cracked content of the fuel. High CO_2 with a clean flame has been the goal of many manufacturers of high pressure burners for years, and even in the early days it was not uncommon for some burners operating at rates of two gallons per hour and up, to attain acceptable CO_2 values. Below two gallons per hour however, the problem was much more difficult even with straight run fuels. The new head design made it possible to maintain a relatively high air velocity and at the same time reduce the volume of air low enough to produce high CO_2 readings with the smallest nozzles that were being used. This, then, was one method by which 100 per cent catalytically cracked fuel could be burned in an efficient manner. Since the requirement to accomplish this was excellent mixing of oil and air, it followed that the normal run of fuels (which even now usually contain less than 100% cat-cracked material) could also be burned without difficulty.



Eugene Hennessy, *Dr. H. R. Heiple, Jack Cox (kneeling) and L. H. Ventres observe oilburner test results in the Shell Laboratory. Smoke Doctor Ventres shows the back of his head to advantage—certainly the brainiest part —but only because he was too preoccupied to face the camera.*

Thus the head served three important purposes. First, it demonstrated that the new fuels could be burned in a clean and efficient manner; second, it increased the efficiency of the gun-type burner; and third, it made possible more efficient operation in small homes, which did not require even one gallon per hour. So, what started out as an effort on our part to demonstrate a satisfactory method of burning cat-cracked oils turned out to be of practical value to the entire industry, as well as the general public. Accordingly the "Shell Head" design was dedicated to all manufacturers who wished to make use of it.

Although clean combustion would seem to have practically solved the problem of sooty boilers, this was not quite the case. It soon became apparent that boilers became sooted after several months of intermittent operation; this despite the fact that the burners ran with a clean flame — a marked improvement over the conventional burner, but still leaving something to be desired. At this point the Shell smoke test demonstrated its usefulness by showing that the smoke occurring upon stopping of the burner was much more harmful than was generally believed. By means of the smoke test it was also found that the starting smoke, though not as great as shut-down smoke, was definitely undesirable. Addition of a magnetic valve in the nozzle line made a great improvement in the oil cut-off, so these valves were recommended for use with all "Shell Head" burners. Further improvement resulted when the valve manufacturers developed the "delayed action" valves.

The Shell-Bacharach Smoke Meter is another example of cooperative development which bore fruit. Like all the other testing devices, it was not developed over night but was built step by step. The time which we devoted to working out the original test method was only a small fraction of the total time and effort that the Bacharach Industrial Instrument Company engineers have expended in developing a laboratory model into a practical commercial instrument which enables the service man of today to measure smoke in a scientific manner without guess-work.

Our review has recalled only a few of the important developments of the past twenty years. We wonder what the future may hold. It is hard to visualize what the "modern" oilburner will look like twenty years hence. Certainly there is good reason to believe that we shall continue to progress step by step as we have in the past.

Oil and our way of Life

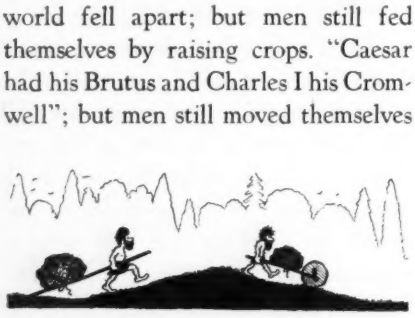
The Milestones of human Progress

by
Max W. Ball*

THE GREAT EVENTS of human progress—those that have changed the way men live—are not always easy to find in the history books; too many histories dwell on political changes, changes in the mastery of men over other men. Most political changes are not basic; they are limited in scope and time. The affect a nation, a culture, a civilization; they last for a decade or a century or perhaps a millenium. They do not affect all men for all time to come.

The basic changes come from man's mastery over nature. They change the way men live forever after. They are not wrought by conquerors or rulers or even by statesmen; they are wrought by innovators; men who learn how to do new things.

Babylon rose and fell; she became a forgotten hill on a barren plain; but men still cooked their food and warmed themselves with fire. Alexander conquered the world, and after him his world fell apart; but men still fed themselves by raising crops. "Caesar had his Brutus and Charles I his Cromwell"; but men still moved themselves



and their goods on wheels. Napoleon won at Jena and lost at Waterloo; but men went on shifting their work to machines. Hitler is dead, Mussolini is dead, and Stalin grows old; but oil and gas still heat and light and carry men.

We owe the way we live to the discoverers and inventors: our unknown ancestors who learned to use fire; the prehistoric men who first grew crops; the nameless geniuses who developed the wheel; the early men who discovered iron and the later men who made steel abundant; the men who harnessed steam and tamed electricity; the men who drilled the first modern oil well. To such men we should raise our monuments. They are the men who change man's way of living. Their discoveries are the great events of human progress.

The obscure Event on Oil Creek

Such an event took place only ninety-three years ago, on a little stream called Oil Creek, in northern Pennsylvania. A man named Drake drilled a well. On an August day in 1859 he struck oil. Without that event, life as we live it would be unknown.

Austria and France were fighting over Italian freedom; the North and South were about to fight over secession. The great names of the day were Cavour and Garibaldi, Napoleon III, Victoria. Bismarck was coming to the fore. Lincoln was an ex-Congressman from Illinois.

Drake and his backers were unknown men; their adventure was scarcely noticed. Only a few hundred people knew about it; none of them dreamed what it would do for mankind. An obscure event in an obscure place, brought about by obscure people. Yet that obscure event, as part of a pattern of like events, has made more difference in how more people live than all the conquests of history.

That obscure discovery, fitting into the pattern of progress, has enabled man to multiply his productivity, his hours of ease, his freedom and range of movement. It has given him a third dimension. It has brought the earth to his door and given him the sky.

Because of that discovery, one American in every four owns an automobile, an average of one in every family. Because of that discovery, millions of Americans no longer cut wood or shovel coal; when cold weather comes they turn a valve. Because of that discovery, a father in Stockholm flies to see his son in Detroit in a day; a mother flies home from Calcutta to New York in less than two.

These are not blessings that the rich man has and the common man covets; the common man has them himself. Most oil and gas heaters are owned by workaday people. More common folks than plutocrats ride in American planes. More than half the automobiles are bought by people with less-than-average incomes. Parking space for employees' cars is a daily American problem.

About two wage-earners out of three own their own cars: male and female, young and old, farm and store and factory, about two workers out of three. The worker not only owns a car; he can afford to use it. He drives it to work, to the movies, to take the family riding, or for a trip to Yellowstone National Park. He drives it an average of ten thousand miles a year, as far as from Paris to Bombay and back. For a day's wages he can buy enough gasoline to drive as far as from Boston to Norfolk; for a week's wages he can buy enough to take him from coast to coast. These things have come from Col. Drake's discovery, the discovery that few men thought important when it happened.

The Need for Oil

The discovery was closely spaced with another of equal rank: how to make steel cheaply and in abundance. Together they gave new vigor to the Industrial Revolution, the greatest revolution in man's way of living since written history began.

The Revolution had started in England some sixty years before, between our War of Independence and the War of 1812. It started with the use of steam and the substitution of coal for wood. It soon reached America, then spread to Continental Europe.

The Revolution is still going on. Two things mark its growth: machines take the place of muscles; factories replace home handicraft. Two things result: man works less and he has more.

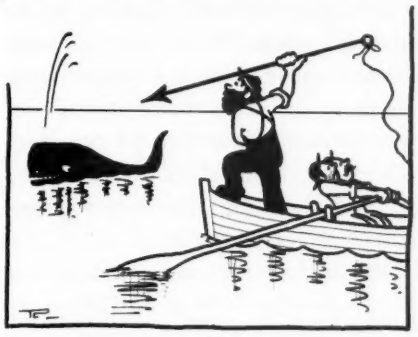
Factories need light. Machines need lubrication. Electric lights were unknown until the 1880's; candles were inadequate. Lubricants were scarce.

*Oil and gas consultant, Washington, D. C.

The Industrial Revolution had to have oil for light and lubrication.

From castor Oil to coal Oil

Men used castor oil at first, and other vegetable oils. Soon they needed more than they could raise at reasonable cost. Next they used sperm oil. Those were the great days of the whaling fleets. New England harpoons had a range of 20,000 miles, and did their work too well. By the 1840's whales were scarce; the price of sperm oil soared.



Before the crisis was acute, men learned to make oil from oil shale and then from coal; first the French, then the British, then the Americans. What they made was mostly kerosene. They called it coal oil, and the name still sticks. They made it from the boghead and cannel coals of Britain; from the oil shales of Scotland, Pennsylvania, West Virginia, and Kentucky. By the middle 50's, Great Britain had 130 plants, the United States 64. Even the proud old whaling port of New Bedford, Massachusetts, had a plant running on Scotch coal.

The Search for more Oil

Still there was not enough. The cost of coal oil was high. Coal oil is not a good lubricant. Man needed a bigger and cheaper source of oil. Without it the Industrial Revolution could not grow. Looking back, we can see that the Revolution was in great danger. It might have had to level off for lack of oil.

Then it happened. In a profit economy it was bound to happen. The need was there. Venturesome men studied how to meet it and thereby make some money. They had vision; the hope of profit gave them courage. They risked much, and they succeeded.

They had some signposts to guide them. Men skimmed oil from springs here and there on both sides of the Alleghenies. The best known springs had given a name to Oil Creek, near Titusville, Pennsylvania. The Seneca Indians had gathered oil there and traded it to other tribes for medicine. White men continued to gather it. They too sold it for medicine; they called it Seneca oil or rock oil.

For years men had been drilling wells to get brine; they evaporated the brine and got salt. In some wells the brine was polluted with oil. The oil was a nuisance; it spoiled the salt. If a salt man couldn't keep out the oil he abandoned his well.

Oil rose from the ground through springs; it seeped into salt wells. Perhaps a well near an oil spring would tap the underground supply.

The first oil Companies

A young doctor named Francis Brewer took a bottle of oil to his former professor of medicine, Dr. Dixi Crosby of Dartmouth. It came from a spring on Oil Creek. A young New York lawyer named George Bissell saw the bottle on Dr. Crosby's desk and was intrigued by it. He interested his partner Johnathon Eveleth. They made several trips to Titusville; eventually the bought the Hibbard farm, where the spring was. Then they organized the world's first oil company, the Pennsylvania Rock Oil Company of New York.

The next chapter sounds familiar: they couldn't finance their company. Who ever heard of digging for oil? What did Bissell and Eveleth know about it? Who were Bissell and Eveleth anyway?

They scraped together enough money to pay for a report. It was made by Dr. Benjamin Silliman, professor of chemistry at Yale. His fee was $526.08, which might interest even a present-day professor. The report might have come from a present-day professor; its conclusion was sound, and couched in many words. It said:

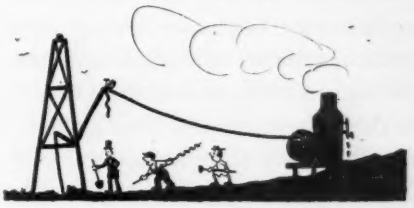
"In conclusion, gentlemen, it appears to me that there is much ground for encouragement in the belief that your company have in their possession a raw material from which, by simple and not expensive process, they may manufacture very valuable products."

With this report the young New Yorkers interested some New Haven business men: James Townsend and his associates. They abandoned the New York company. Together they formed the Pennsylvania Rock Oil Company of Connecticut. Then they fell out, the New Yorkers and the men from New Haven. For three years they did nothing. At last, in 1858, the Townsend group formed the Seneca Oil Company, leased the Hibbard farm from the Connecticut company, and got busy.

How Colonel Drake struck Oil

They hired as general agent a man named Edwin L. Drake, "Colonel" by courtesy and custom. Drake was tall and bearded. He had been a steamboat clerk, a hotel clerk, a dry goods clerk, an express agent, and a railroad conductor on the New Haven. He had never dug or drilled a well, but he had two great assets: determination, and faith in the enterprise. He put in $200, probably his entire savings.

He went to Titusville and started to dig a well. Water drove his workmen out. He decided he would have to drill instead of dig. He went to Tarentum, Pennsylvania, talked with some salt well men, watched them drill. Then he designed and built a derrick; bought an engine and boiler. He had hired a salt well driller, but the driller failed to show up. By that time summer was over.



Next summer he hired a driller known as Uncle Billy Smith. Uncle Billy worked for $2.50 a day, and threw in the services of his fifteen-year-old son. Uncle Billy had been a blacksmith; he made the drilling tools.

The Colonel was a solemn man; he didn't like to be laughed at. He told the folks around Titusville that he was drilling an artesian well. They laughed anyway; they called the well "Drake's Folly." The Colonel was a determined man. He and Uncle Billy and Uncle Billy's boy went on drilling.

By a certain Saturday evening—it was August 27, 1859—they had drilled to 69½ feet. They pulled the tools and quit for over Sunday. Sunday morning Uncle Billy's boy looked down the hole. He saw liquid standing near the top. It was oil.

Vision and courage and the hope of profit had won. The future of the Industrial Revolution was secure. Man had taken another long stride in his mastery of nature. He and his sons and his sons' sons could look forward to better and better ways of living.

Ask any social economist; he can tell you how much the Industrial Revolution has changed the way men live. The last 150 years have seen more change than the previous 5,000. In the way they lived and worked, Paul Revere's artisans were closer to Ur of the Chaldees than to Detroit of Today. Thomas Jefferson's farming was more like that of the First Dynasty than that of the last decade. As one writer has put it, "A new gigantic material framework for human affairs had come into existence."

Oil's Part

What part in this amazing change has oil made possible? The 100-year figures from 1850 to 1950 tell part of the story. For another part we'll use 1950 as a typical post-war year; it's the latest year for which the figures are available. When we compare monetary figures we'll use dollars of the same value on both sides of the comparison. When we say oil we'll mean petroleum in all its fluid forms: oil, natural gas, and associated liquids.

And, please note, we'll not claim for oil all the advances made since 1859. We'll have in mind the part played by steel and coal and copper, by steam and electricity and a thousand other things. We must pay due homage to their achievements. Then, in all humility, we must recognize an inescapable fact: without oil, the great source of fluid energy and the sole lubricant of consequence, those achievements would not have been possible. The record since 1859 could not have been written without oil or its equivalent. It's an amazing record. Let's look at a few of its pages.

Oil and Employment

One great index of the Industrial Revolution is increased employment. How much employment depends on oil?

Take first the industries that result directly from oil, industries that did not exist when Col. Drake drilled his well: the oil and gas industry itself; the automobile and the industries that go with it; the airplane and its companion industries; buses, trucks, and tractors; oil and gas furnaces and stoves; the diesel industry; the building and upkeep of modern highways. They employ nearly ten million people: one American wage-earner in every six.

That's not all. Nearly all ships run on oil. More and more trains run on oil. More and more farm work is done by oil. Thousands of factories and power plants burn oil or gas. We have already counted nearly ten million people whose jobs come directly from oil; many more millions work at jobs for which oil supplies the energy. The key to our economy is fluidity—free and rapid movement of people and things—and most of our fluidity is supplied by liquid fuels, all of which come from oil.

Still we have not told the story. The inescapable use of oil is for lubrication. No wheel can turn long without it. Without oil, every machine in the United States would grind to a stop. Without oil no factory could run, no railroad, no ship, no mine, no car or bus or truck or tractor, no stationary engine, no generator.

The truth is, no one knows how many people depend on oil for their employment. We have to guess. Here is a guess that is probably too low: that 80 workers in every 100 would lose their present jobs if our oil supply should fail; that, directly or indirectly, 8 jobs in every 10 depend on oil.

Hours of Work

Another great index of the Revolution is lessened hours of work. How much have working hours shortened since oil came in? In 1850, the average wage-earner worked 70 hours a week; now he works 40. In 1850, a man worked nearly 42 per cent of his living hours, from week's end to week's end; now he works less than 24 per cent. Since the advent of oil, he has nearly one-fifth more time for sleep and recreation, worship and fun.

What about the average value of an hour's work? In 1850 it was 27 cents.† In 1950 it was nearer $1.27. An hour's work is worth more than four times as much as it was before Col. Drake struck oil.

The value of an hour's work is a good measure of productivity, better than mere volume per hour; it takes account of quality as well as quantity. We complain about the high cost of living, and with reason, but a large part of what we pay is the price of high quality.

As a daily matter of course, we buy quality that even the richest man could not have had in 1859. We buy quality in food and clothing that he never heard of. We buy comfort in our homes, convenience in our offices, and precision in our equipment that no man in 1859 could have bought. We buy an average thirty to forty miles an hour on the ground, where he could average no more than four to five. We buy two hundred miles an hour in the air, where he could not go at all.

We buy these things, and find them within our means. Why? Because, since oil became abundant, we create four times the value with half the hours of work.

Muscles and Machines

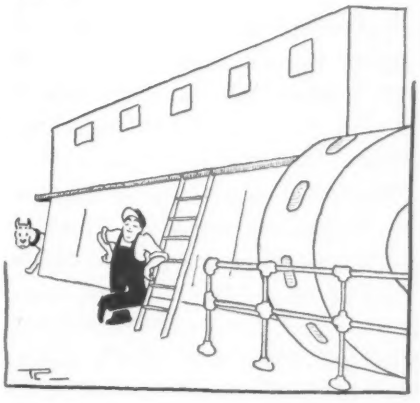
We have an even better index of progress: the form of energy with which we do our work. In 1850, 94 per cent of our productive energy was supplied by muscles. Today, 90 per cent is supplied by machines. Here is

†In terms of 1947 dollars.

Revolution beyond all doubt! Man has grown to a new stature.

Machines are servants—slaves, if you will—to do the work that man wants done. In 1850, machine slaves did 6 per cent of man's work; now such slaves do 90 per cent. Speaking in averages, today's worker is master of nine slaves—machines that do nine times as much work as he does. This is slave labor on the grand scale; the most beneficent form of slave labor the world has ever known.

Having slaves to do his will has created a new workman. When he had to do 94 per cent of the physical work, the workman was paid for his brawn, with little heed to his brains. He could be narrow between the eyes if he was broad between the shoulders. Today he is paid for his brains. The percentage of unskilled work goes down and down. Much that we call unskilled would have taxed the general skill of 1859.



We have changed drudges into masters of machines. And nine-tenths of the change has come about since rock oil replaced whale oil.

Not Oil alone

Oil alone did not work these miracles. Obviously not. Many other things have been needed: the internal combustion engine to turn oil into energy; electricity for light and power and to spark the gasoline motor; better metals for machines and for the tools to make them. Most important, perhaps, the substitution of steel for iron. The Bessemer furnace came just before the Drake well, the open hearth just after it. They made steel abundant.

All of these things, including oil, have been part of the revolutionary advance. Each has been essential. Oil could not have done the job alone; that much is clear. Another thing is also clear: the job could not have been done without oil. Even steel could not have done it; the value of steel is in making machines, and machines can not run without oiling. Since 1859, during 90 per cent of its growth, the Industrial Revolution has depended on oil for its achievements.

Oil Use and industrial Output

A great oil company has an advertising slogan: "The better you live the more oil you use." No slogan was ever truer. Read in reverse it is equally true: "The more oil you use the better you live." The proof is easy to find.

The more men produce the more real wealth they create. The more real wealth they have the better they can live. Part of their real wealth is used to increase productivity still more; the rest goes into better living.

This gives us a good first step toward sizing up a country's standard of living; how much value per person do its people produce?

Let's take five diverse countries: the United States, Sweden, the United Kingdom, France, and Italy. In 1950 the gross national product per person in the United States was $2,008, in Sweden $1,129, in the United Kingdom $844, in France $795, in Italy $335.

Then note this: the 1950 use of oil per person in those countries followed the same order. In the United States it was 657 gallons, in Sweden 175 gallons, in the United Kingdom 111 gallons, in France 84 gallons, in Italy 35 gallons.

Call it cause, call it effect, call it cause and effect combined. The fact remains: the more oil per person the people of a country use, the greater value per person they produce.

That brings us to another question: how much of the oil the people use goes into productive activity, how much into better living?

An answer can be had by dividing the use of oil per person into the value they produce. The result is national product per person for each gallon of oil used. If high, it shows that most of the oil the people use goes into production. If low, it shows that after their productive demands are met they use a large amount for better living.

Take the same five countries. The 1950 gross national product per person per gallon of oil used in Italy was $9.57, in France $9.46, in the United Kingdom $7.60, in Sweden $6.45, and in the United States only $3.05.

From these figures, the people of the United States, compared to those of Italy or France, used three times as much oil for living well: for pleasure driving and pleasure flying; for heating their homes and cooking their food; for making power for better lighting and refrigeration and washing machines; for all the multitude of things by which oil makes life easier and more pleasant. All this, plus several times as much for productive purposes.

Many things act and interact to make living better. Oil is one of them, so potent among them that its use per capita is an index of living standards. Read it either way you wish, the truth is there: The better a people live the more oil they use; the more oil a people use the better they live.

Great Risks and great Results

The year when George Bissell picked up the bottle of oil from Dr. Crosby's desk was 1851. Eight years went by before Uncle Billy's boy looked down the hole and shouted "Oil." Eight years of hope and disappointment, of enthusiasm and discouragement, of failure and final triumph.

Who sweated out those eight years? Who won that final triumph? What motive found us oil? What system has made it abundant?

No government drilled the Drake well. No public man would have dared take such a risk with public funds—such a risk as Bissell and Eveleth and Townsend and Drake took with theirs. No statesman would have risked his reputation for good judgment, as they risked theirs. No ruler told them where or how to drill. No conqueror supplied the vision and the courage.

The vision and the courage came from everyday men like you and me; men who took big risks in the hope of making a fortune. Because of their vision and their courage, the United States produced last year nearly two

(*Please turn to page* 160)

Know your Costs

Concluding Article of six, to stimulate fueloil Men for better Management

by

H. H. Ragle*

Edit. note: Mr. Ragle for a number of years has been a consultant on management problems of fueloil marketing, and has built a strong reputation for this work along the East Coast. In asking him to write this series, of which this is the final installment, it was not intended that he should tell people how to correct their ills since that is his paid profession. Rather the desire was to awaken management to the recognition of weak spots in their operating methods.

THE TIME: a hot, sultry day in August, 1859. The place: a hundred-odd-acre farm near Titusville, Pennsylvania. The event: the literal fulfilment of Colonel Drake's dream—the drilling of the first oil well. Its significance: though known for thousands of years and used for many purposes, crude oil had never before been produced by methods considered commercially practical.

Since that eventful day, when two barrels of "Ile" were produced, a very great oil industry has been created, its daily domestic production alone averaging 7,000,000 barrels.

From a $40.00 sales revenue for that first day's production, the industry, though still comparatively young, ranks fourth among the great industries in capital investment employed.

This growth did not "just happen." It has been due to a vigorous spirit of pioneering, a determination to render an invaluable service to mankind and a willingness to assume great capital risks.

The oil industry has been very largely responsible for the phenomenal development of these United States into the greatest nation upon which the sun has ever shone. Oil has had an all-important part in making possible our present-day high living standards—the envy of the rest of the world. Oil has most vitally affected the daily lives of all civilized peoples —and many who are not.

Less than sixty years ago, there were only four automobiles in the entire United States—a Ford and three others. Today, the average pedestrian should have keen, piercing eyes on all sides of his head, tentacles or feelers like an octopus, as many feet as a centipede, the mental alertness of an Einstein and the physical strength and durability of Hercules; for if in a normal lifetime he is able to dodge the 52,000,000 motor vehicles now on the highways, he still has a chance of going to his "heavenly reward" by the planes overhead, or elsewhere by the well-oiled subways underground.

To get a firsthand picture of the "Oil Age," ponder over a few more facts.

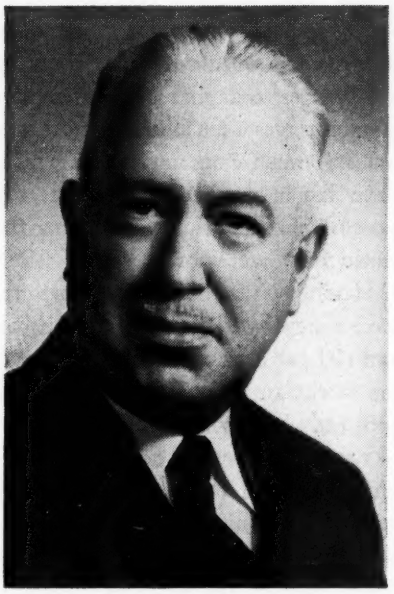
Currently, over the figures of twenty years ago, (1) crude oil production has been increased by 164%, (2) crude runs through the refineries by 165%, (3) use of fueloil by 180%—1950 over 1926.

As of January 1, 1952, there were 5,704,000 central fired domestic oil burners in use—an increase of 650% over 1931 and more than 129% over 1945.

Too little Attention to Costs

Thus the fueloil segment of the industry has been so busily engaged in the many avenues of pioneering the distribution of nature's safest and cleanest fuel to the public that too little attention has been given to the all-important problem: know your costs. As in every young industry, there have been many things to learn, many tough problems to solve. There have been great transitions in policy and methods.

Insofar as distribution to the household is concerned, the typical independent distributor has made much greater progress in perfecting the overall service than has the typical integrated major company, and in most communities handles by far the greater portion of the ultimate retail volume to the consumer. In acquiring such a position, he has had much to do with the sale and servicing of oil-burning equipment.



H. H. Ragle

The entire field of fueloil distribution has, throughout most of its successive pioneering stages, been highly competitive; and the consuming public in return has profited by prices which at times were wholly inadequate to yield a sufficient return to the industry.

The independent has blazed the trail and paved the way for the phenomenal public acceptance of oil heat. It has cost vast sums of money to do all of this.

In every young industry, however, there is from time to time an influx of "incompetent elements," who in their blind, wild scramble for business frequently resort to wholly unjustifiable and thoroughly unsound marketing practices . . . chief among them are imbecilic price-cutting, so-called "free" burner service, extremes in making rush deliveries in small lots at any hour of day or night and many other inexcusable practices.

It is too bad that the decent operators have to be plagued from time to time by such unwholesome cut-

*Petroleum Marketing Consultant, 162 West 54th St., New York 19, N. Y.

throat types of competition from such outfits—"here today and gone tomorrow."

Those distributors who know their costs are not the ones, of course, directly responsible for such unsound practices as evidenced in the industry.

Margins not properly established

Without undue prejudice to the past nor to presently existing price controls, the independent segment of the industry has somewhat blindly and literally followed along under the price structure as established often by one or more of the major companies, who actually may have had comparatively little business at stake in the area to justify such price leadership.

While in previous articles of this series, stress has been placed on the fact that the typical major company has at least five levels of operation from which to make an overall return, the independent has only one plane for a return on fueloil—namely, that of the overall gross margin "as permitted" by the reference seller's price structure.

Frequently, unless burner sales and service are being conducted on a profitable basis, a portion of this slender margin on oil has to be absorbed to cover losses on the maintenance of burner service.

It is all too well-known that costs of every conceivable kind have been materially increased, particularly since World War II; yet margins have not been increased commensurately to cover greatly added burdens of doing business.

Ten years ago, the gross margin in the New York City area was equivalent to about 31.5% of the average retail selling price; whereas at present it is but slightly over 25%.

In ten years the distributor's laid-in cost of oil has been increased by 100% and the cost of direct operation by 100%, while during the same period the percentage of gross margin, in relation to the retail selling price, has been reduced by approximately 20%.

The foregoing facts certainly indicate, beyond any shadow of a doubt, that most of the individual members of the industry indeed have been working tirelessly and aggressively in building an enterprise now rendering an indispensable service to a minimum of almost six million owners of central-heating-plant, oil-fired dwelling establishments, to say nothing of the innumerable industrial users requiring liquid fuel for heating and processing.

There is no gainsaying the fact that the majority of the units in the industry have tried earnestly to conduct their operations along the lines of rendering a service to the public and showing an overall net profit at the close of each accounting period.

It is also true that any well-managed company, large or small, has some sort of an accounting system set up whereby a determination can be made from time to time, monthly or annually, as to the overall earnings or losses.

Installations doubled

Since August, 1945, the end of World War II, the member of domestic burner installations has been more than doubled.

Almost within the very same period of time the cost of doing business has been at least doubled. But the gross margin has been substantially reduced, and in all too many cases the productivity of labor has been substantially less.

Is it any wonder that so many distributors have been asking the question:

Why—with the volume of business we do, is our net profit so small?

One perfectly obvious and rather trite answer is, "Insufficient gross margin to cover all costs and a better return." That, however, is not the answer, nor is it the right approach.

So very commonly a distributor has gone on from month to month, or from year to year, knowing only that he made (or lost) so many dollars—this being due to an astonishing lack of knowledge as to which phases of the operation were profitable and which unprofitable.

Without the benefit of specialized knowledge as to costs, he is not in a good position to apply a proper remedy, nor in fact to know what the remedy should be, when it should be applied, and how.

But when it comes to other matters, he might be able to recite from a proud memory the pedigree of a fine dog or piece of livestock. He might be intimately familiar with the standing of every member in each of the major-league baseball teams, or know the best lure for fishing and exactly where and when he is most likely to catch his favorite species of fish.

Knowledge is Power

Pressed for an answer to some of the following questions, he may be hesitant or speechless, in whole or in part:

Is your sales markup adequate to make a profit on equipment? What has been the average cost per service call?

Is the work of a particular salesman actually profitable from a dollars-and-cents viewpoint?

Has the money for various forms of advertising produced a profit?

Have you enough accounts in a particular territory to make it profitable from an operating viewpoint?

Is the cost of overhead commensurate with your volume of business?

Are you sustaining any losses, moneywise or from the standpoint of prestige, from employees who are improperly trained or who haven't learned the extreme value of courtesy in telephone or personal contact?

How many accounts have you lost through credit control which is too hardboiled?

How many good accounts have been scared away by an untactful manner of handling a credit question?

Is this department or that department overmanned?

Is cost of automotive maintenance on a level consistent with true value?

What, in terms of "cost per gallon," does the operation of your bulk terminal involve? Drivers' payroll cost per gallon, etc.?

Distributors frequently complain of the difficulty of comparing costs with other distributors. The obvious answer is, of course, a lack of uniformity. For example, one may brag about a low cost per gallon for the entire delivery operation. The questioner with a true knowledge of costs soon discovers that depreciation on the

equipment has not been considered. It might also be that the various and sundry payroll taxes and certain costs of insurance, paid vacations and other fringe benefits have not been included in the direct cost figures.

Among other innumerable variations, a distributor might boast of the gallonage output per day or hour. An inquisitive nature soon discovers that the so-called average daily output figure was actually nothing of the sort. It was instead one truck, during a few days (averaging three or four hours overtime) in the height of the season, that established such a boastful output. Who kidded who?

Be prepared with Facts

The more quickly the individual units of the industry require their accounting departments to adopt thoroughly sound cost-charting methods, in keeping with acceptable and uniform standards as variously promulgated by some of the trade organizations, the better will be the industry's battle for more adequate margins.

The fueloil segment of the industry would thus have stronger support for the entirely different approach they must make to their sources of supply, to say nothing of placing the facts before any existing price-regulatory body at every possible opportunity. The "slaphappy" days of the past, when the industry at large continuously spoke of "cents and mills per gallon," are just as obsolete today as Old Dobbin and his carriage would be along the motor highways.

The typical well-managed independent distributor can operate much more efficiently than the majors, and for that reason alone he has been able to survive in spite of the wholly inadequate margins so generally prevailing. This fact, however, is no justification for the sources of supply to continue to "keep the squeeze on" as far as equitable margins are concerned.

The responsibility for bringing about changes must not be "left to George," because George thinks you are going to do it. It is a responsibility and a project which all of the individual units of the industry must share, if results are to become reality.

A thorough knowledge of costs is just as vitally essential as are the plans of an architect, or the varied controls to be found on the instrument panel of an automobile or in the cab of a locomotive.

Trying to operate a business successfully under existing conditions today without an adequate knowledge of costs is simply unthinkable. It is no more sensible than putting a small boy out in a rowboat on a large body of water in the stealth of night without a paddle.

Under presently existing margins and price ceilings as established by the OPS and the spiralling costs—thanks to the New Deal, Fair Deal and all the blighted and perverted ideas of would-be economists—the industry is face to face with the dilemma of:

1. Sensibly curtailing costs of operation, through increased productivity for each and every dollar expended for the various phases of operation.

2. The necessity of getting a greater percentage of gross margin between the laid-in cost and the retail selling price.

Achieve Objective

From a sound business viewpoint, the distributor should definitely make up his mind to achieve both the objectives, insofar as feasible from practical and lawful viewpoints.

From all present indications the intensity of competition will continue to flourish, and fueloil in some places is not overly abundant.

While it is, of course, not very probable at the present moment, due to OPS regulations, cost-conscious fueloil distributors in the future are going to consider seriously the sound idea of basing retail prices on their own costs and not on a major competitor—the so-called "reference seller" or market price leader, whose interest may be only nominal, if any at all.

Even in the past—and continuing in the present — some alert-minded, cost-conscious distributors have been getting more for their product than their so-called major competitors.

To know your costs is to place yourself in a position to actually see the extremes which may need correction.

Cost-finding need not be a complex job. The chief requirement is to keep it simple and currently up to date.

Historical accounting figures are usually too late to be of any direct value in control work from day to day, even though they do have their place. But soundly conceived, quickly prepared cost figures are of infinitely greater value to the current day-to-day administration of a business enterprise.

By way of specific citation, consider the following example. The actual delivery operation is the greatest single expense incident to the distribution of fueloil. It is doubly important, therefore, to build up "meaningful" figures to permit more intelligent interpretation and comparisons to denote actual conditions.

E.g., usually at the end of the month the accountant prepares a statement indicating the overall Cost Per Gallon of distribution. Such fixed items of automotive operating costs as motor vehicle taxes (license plates), insurance and depreciation are usually charged off by an equal pro-ration each month of the annual expenses. Meanwhile, such items as repairs — whether minor or major, tires, tubes, batteries, painting, etc., are usually charged off to operating expenses for the very month in which the expenses actually are incurred.

The ultimate result of these methods is a sadly distorted Cost Per Gallon figure, which might tempt a distributor to jump off the Empire State Building—or, on the other hand, take a trip to Florida—just depending on how large or how small the debits for the particular month might have been.

A better Way to do it

Why not consider the great practicality of pro-rating all of the fixed charges and major costs in the same direct proportion in which the gallonage, on the average, is delivered, month by month.

This should not be at all difficult, because historical records will readily reveal the total monetary value of the major expense items; and from the record of deliveries, a month-by-

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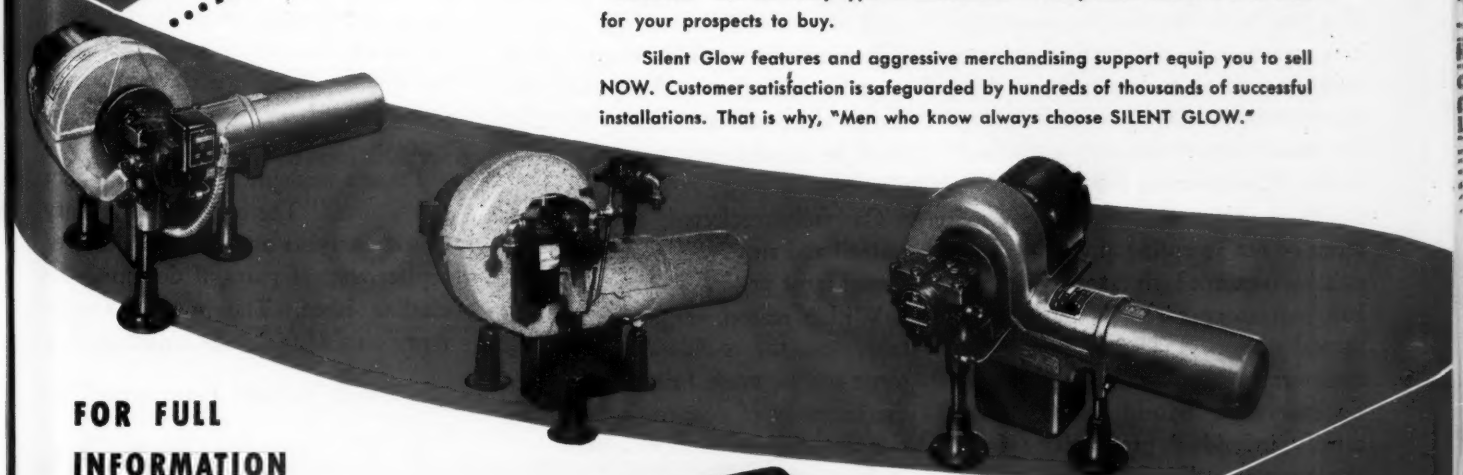

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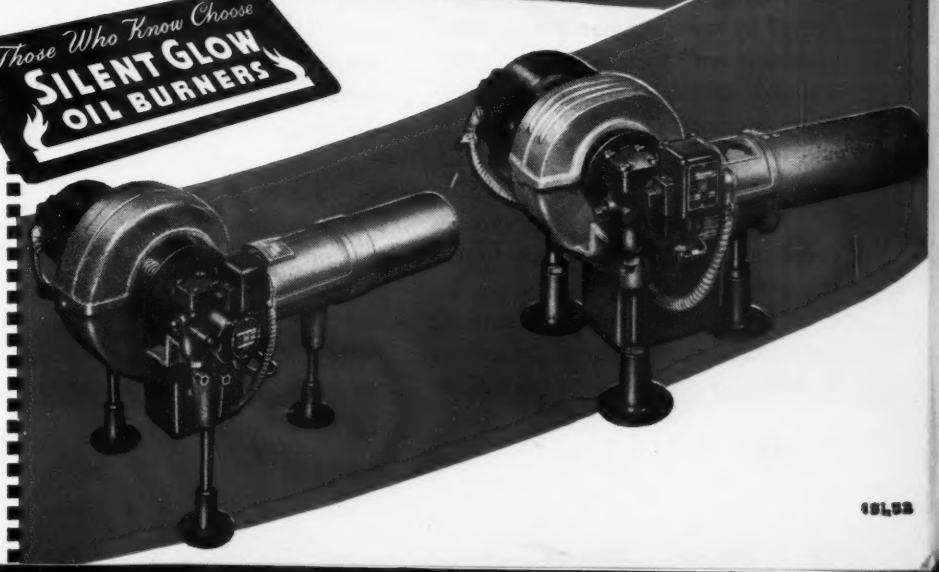

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month percentage chart, by which those major classifications of expense can be charged against monthly operations, may be easily prepared.

The following table illustrates the breakdown, month by month, percentagewise, of the retail sales of a large Eastern Seaboard operation. In various localities there may be slight variations, but certainly the gallonage records are available by which to compute a comparable table.

Monthly Percentage of Sales

(*Light Fuels*)

January	16.3%	July	1.7%
February	17.8%	August	2.0%
March	14.4%	September	2.3%
April	7.6%	October	5.2%
May	3.0%	November	11.9%
June	2.2%	December	15.6%

Every time the industry emerges from a period of rather "easy sailing," because of conditions primarily favorable to the seller, into less favorable conditions, we get the "blues" and are prone to think in negative terms.

Too many distributors feel as though whatever good money they may have made in the height of the heating season must be lost in the off season. Many other distributors believe it to be inevitable that burner service must continually be conducted at a loss, that "service is a necessary evil—we must be able to furnish it to hold our business," etc. So they mournfully sit back, without doing too much about seeking ways and means of overcoming the situation.

Others have thought strictly in terms of not accepting anything as inevitable—except high taxes and screwball regulatory measures by governmental authority. They think in positive terms and actively, aggressively do everything within reason to intensify individual productivity from the payroll dollar—as may be evidenced by more summer service work, "farming out" their drivers to other seasonal industries and innumerable other methods that safely minimize operating expenses, while taking advantage of every possible avenue by which to increase operating revenues through a positive approach to the problem.

All too often a company may be overmanned with workers who are not directly productive — a condition showing lack of proper forethought in streamlining all of the necessary paper work required for the proper administrative controls over the several phases of operation. Too many times management may think that the maintenance of low costs means the retention of low-wage, inexperienced personnel—retained because they are inexpensive, rather than for what they can do.

Excessive record-keeping, duplications, ponderous files, too much red tape, too many printed forms to maintain, may all be to some little or great extent an unnecessary drain from the profit side of the ledger.

In further retrospect of certain highly important angles of cost control as set forth earlier in this series, give thought to:

A few simple Maxims

There is really no substitute for good old-fashioned work.

Needlessly giving away a part of the meager gross margins is but a short form of business suicide.

The character and intelligence of the service rendered—physical or by the product—must be ever impressed upon the user as filling a practical need.

Relentlessly conscientious effort must be exerted to make certain that the product and services so featured must be consistently as good as the claims made.

Carefully selected, competently trained and supervised, courteous personnel must prevail.

Within reason, employees must be taken into the confidence of management and be made fully cognizant of the necessity of cooperating to maintain commensurately low costs.

A reasonable and lawful spirit of cooperation should exist among competitors, to the end that abuses so common to the industry can be sensibly abolished.

Tactful public relations work should ever be employed in order to better promote customer understanding and cooperation.

The foregoing is only suggestive and is certainly not all-inclusive, for there are many others which can be used to help effect lower costs.

To paraphrase, the old bromide, "An ounce of prevention is worth a pound of cure," deliberately premeditated cost control through knowledge is much more effective than "ancient" historical records.

Conjuring up reasons or alibis as to why certain costs are extreme is not nearly so important as a critical, hardboiled analysis of the underlying reasons for them—and what, if anything, can sensibly be done to effect a remedy.

Knowing his costs will place the distributor in an infinitely better position to discern the feasibility of doing what he can best afford to do, rather than what he would like to do.

One should always avoid ever assuming an attitude which would be "penny-wise and pound-foolish"—as might be illustrated by the continued use of a decrepit old piece of equipment, maintained at an excessive cost, itself constituting a further excessive cost by virtue of its limited productive capacity.

Do every reasonable thing to keep costs on a level consistent with the overall idea of a sensible and practical operation for profit. Make a similar spirit contagious throughout the organization—but not at the expense of losing worthwhile, profitable business, nor at the expense of employees or of the quality of service rightfully rendered in exchange for the customer's money.

Pause a moment for reflection—not refreshment. The oilburner warranty covers one year and provides for free replacement of parts, if defective, including labor. The prevailing warranty on a $5,000 auto is ninety days.

"Santa Clause Guarantee"

In addition to this "Santa Clause guarantee," some distributors are still not satisfied, and in their blind greed for business insist upon giving free service. Certainly the objective of every cost-wise distributor is to make service not only self-supporting, but also reasonably profitable. Why not make a hardboiled analysis of the entire service picture and face the real facts thereby revealed? Then do something about it.

A real, factual knowledge of de-

(*Please turn to page 158*)

ELECTRIC . . .

. . . with new improved cut-off

modern material. Both valve and disc materials provide immunity to deterioration beyond all normal operating conditions.

And think of this . . . the new valve assembly is interchangeable in all Webster Electric Fuel-units sold in the past sixteen years! Where else can you get such practical engineering design?

Specify this sensational new Webster Electric 6000 Series Fuel-unit, as well as a Webster Electric Ignition Transformer, on the next order to your heating equipment manufacturer. Ask your Webster Electric Authorized Service Station or your Heating Wholesaler to include them in your next dealer service package.

Similar units are made for sale in Canada by Canadian Acme Screw & Gear, Ltd. of Toronto, under license by Webster Electric Company, Racine, Wis. Established 1909.

This new WEBSTER ELECTRIC Ignition Transformer offers you these advantages...

(1) It has a large full opening *at the top;* (2) it provides extra free access to the junction box; (3) primary leads can enter by any one of six knockout locations; (4) there is no external bulge to mar neat appearance; (5) it may be used with all standard and special mounting bases; (6) improved internal shield design prevents radio interference; and (7) this one transformer will replace nearly 100% of the transformers now in service.

ELECTRIC

WISCONSIN

and Fair Dealing an Obligation"

Price Increase ordered for East Coast Fueloil

ON JUNE 15 Acting Defense Mobilizer John R. Steelman in a letter to Economic Stabilizer Roger L. Putnam authorized an increase of eight-tenths of a cent per gallon in the price of East Coast heating oil, permitting primary suppliers to raise their ceilings by 0.65¢ per gallon and granting an increase of 0.15¢ per gallon to jobbers and distributors. Specific details of the OPS order were not available when this item was written.

The OPS order which will put the increase into effect is expected to specify that the 0.65¢ increase is to be applied at barge and tank car levels and that tank wagon and "rack" prices will be raised by the full 0.8¢. In this way the fueloil dealer who buys from the terminal and stores product in his own bulk plant for wholesale and retail sales will receive the benefit of the 0.15¢ per gallon mark-up, but the peddler who buys under the "rack" is excluded. The increase would apply from Maine to Norfolk and taper down south of Norfolk.

Tank wagon increases are to be permitted inland along the East Coast as far as is customarily supplied from primary terminal points along the Seaboard and specific ceilings are to be spelled out for tank car sellers.

Dr. Steelman's decision represented a compromise between the original proposals of the Fuels and Transport Div., OPS, which recommended on May 22 a 1.2¢ per gallon hike in tank car prices for No. 2 fuelol along the East Coast. The June 15 decision, however, did represent a victory for the Petroleum Administration for Defense in that another part of the proposal, which would have rolled back Gulf Coast ceilings 0.2¢ to 7.8¢ per gallon, was rejected.

Steelman's letter also asked the Secretary of the Interior "to cooperate to the fullest by taking whatever steps are necessary to insure an adequate production and equitable distribution of fueloil during the coming winter." And, the Maritime Commission was requested "to study the developing situation with respect to the supply of tankers and . . . to assure adequate tankers to move oil to the East Coast in the necessary volume this winter."

About 10 days before Dr. Steelman's decision, Otis Ellis, general counsel of the National Oil Jobbers Council, arranged for a conference of 17 representatives of jobber organizations to discuss with OPS officials the possibility of having included in the increase a provision for some margin relief for secondary distributors. The group included, besides Mr. Ellis acting as spokesman, Harry Hilts, secretary of the Empire State Petroleum Association; Dave Catterton, secretary of the Virginia jobbers association; Paul Hadlick, general counsel, National Oil Marketers Association; F. S. Burroughs, national secretary of OHI's Distribution Division and jobbers from New York, Pennsylvania, Virginia, Connecticut and New Jersey.

Meeting with Edward R. Phelps, Jr., assistant director of OPS in charge of price operations, and Loring Cramer, chief of the Petroleum Branch, OPS, the day was spent in presenting the case for jobbers. As a result, the OPS officials requested and received substantiating information and data. Four jobbers, specifically, met with OPS on June 9 and worked out accounting forms to be filled in by jobbers to back up claims for price adjustments.

Baltimore Ceilings raised

In a separate action, sellers of domestic heating oils in the Baltimore area were granted an increase of 0.3¢ per gallon for tank wagon deliveries of No. 2 fueloil within a radius of 16 miles of Baltimore City Hall. The increase, effective June 28, is in addition to the boost authorized in Dr. Steelman's letter.

Baltimore dealers, through the Oil Heat Association of Maryland, Inc., applied for a price increase during the 1951-52 heating season, submitting data to demonstrate that despite increases in sales volume, the percentage of profit, as related to sales and net worth, was significantly lower than 1950 and prior years. The raise results in a ceiling of 12.5¢ for No. 2 fueloil in Baltimore and is implemented by Supplementary Regulation #8 to CPR 17.

The increase, granted under the Johnson formula of the Defense Production Act, is likely to set a pattern for similar appeals from other Eastern Seaboard dealers and possibly other areas. It should be noted that the boost is not automatic; dealers must apply for it with proof that, as determined by the Johnson formula, current earnings are less than 85% of earnings in the best three-out-of-four years in the period 1946 to 1949. General overhead, labor, transportation and such costs may be cited to illustrate that a "hardship" exists.

❖

Texas Gas seeks higher natural Gas wholesale Rates

TEXAS GAS Transmission Corp. has asked the Federal Power Commission for authority to raise its wholesale natural gas rates by approximately $11 million, effective July 1. The Company said current rates, which have not risen for ten years, are not now sufficient to cover present or anticipated costs of service and that the increase would be apportioned among utility customers of Texas Gas in an 8-state area from Louisiana to Ohio.

W. T. Stevenson, Texas Gas president, explained that about $8,450,000, more than 80% of the requested increase, represents the added cost of natural gas purchased by the company, reflecting substantial rate increases recently proposed by certain of its suppliers. Higher operating costs, which have been absorbed up to now by the company, account for the balance of the proposed increase, he continued.

Texas Gas' 2600-mile pipeline system supplies natural gas to 34 utilities serving more than 130 communities in Louisiana, Arkansas, Mississippi, Tennessee, Kentucky, Indiana, Illinois and Ohio. A 400-mile pipeline expansion is planned this year to move additional supplies to existing customers.

For High Velocity Heating with 4" pipe see the NEW MONCRIEF PIPE and FITTINGS CATALOG

IT'S JUST OFF THE PRESS!

Send for your copy of this new catalog No. 57. Also for the name of your nearest Moncrief jobber.

Also MONCRIEF SUREFIT Carton Packed FITTINGS

FOR { PERIMETER INSTALLATIONS / EXTENDED PLENUM INSTALLATIONS / CONVENTIONAL INSTALLATIONS }

IN { BASEMENT . . . / CRAWL SPACE . . . / SLAB-FLOOR . . . / UTILITY ROOM . . . / INSTALLATIONS }

Also CARTON PACKED:

MONCRIEF Snap Lock Warm Air Round Pipe
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} Quicker Assembly! Easier to Handle! Quicker to Install!

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF — FURNACE PIPE AND FITTINGS

Holman tells IOMA of Need for price Adjustments, oil Storage

EUGENE HOLMAN, president of the Standard Oil Co. (N. J.) was principal speaker at a luncheon on June 4, part of the all-day program for the annual meeting of the Independent Oil Men's Association of New England, held at the Hotel Statler, Boston. He reviewed the growth of the use of fueloil for domestic heating and made these principal points:

1. Predicted that New England would require 11% more middle distillates in 1952, a rise of about 7 million barrels.

2. Hoped for adjustments that will permit the domestic oil industry once again to react "to the stimulus of price."

3. Suggested year-'round operation of all facilities of the industry to smooth out production of all petroleum products.

4. Advocated increased storage at local levels in New England.

Holman briefly described the importance of New England to the oil industry, particularly in relation to its location at the northern head of the 17 Eastern states that make up District I, which last year "accounted for almost 40% of domestic demand, or approximately 25% of all the oil used in the free world." But most important, only about 1/3 of 1% of District I's consumption was produced locally and all of New England's supply, including 70 million barrels of middle distillates, had to be transported from the sources of supply.

Oilheating a modern Necessity

Automatic home heating, particularly in New England, he continued, has proved to be a modern necessity, resulting in more insistent demand for heating oils, as evidenced by the fact that during the past ten years demand for gasoline has grown at the compound rate of 5½% per year and demand for distillate fuels has grown at the compound rate of 9½% per year. "Right now, the estimate for New England's demand growth in 1952 is about 11% for middle distillates . . . a rise of about 7 million barrels for New England alone."

In relating how the oil industry has adapted itself to shifting demands, first for kerosene, then gasoline and now fueloil, Holman emphasized that "so far they have not presented any practical difficulty in supplying world needs." But he contended, "When it was economically attractive to make gasoline, for example, gasoline was produced. With the turn of the seasons and the growing demand for heating oils, their price in relation to gasoline changed in directions which prompted the refiner to manufacture the amounts needed. Such has always been the function of price." Recently, this function has been affected by government price fixing so that the "element of independence within our business that once

Super Red Streak Model SH — The heavy duty cleaner that does everything.

Raise Your Own Salary with a Super Red Streak

Start now! Clean heating plants the Super Way. Make more money easy, fast. Cleaning fees are only part of your profits. When you do the cleaning, repair and replacement jobs are revealed before competitors are called in. The powerful new Super Red Streak Model S.H. cleans all types of heating plants, provides both wet and dry pick up. Cleans debris from flooded basements; cleans boiler tubes.

Super chimney cleaning tools are standard equipment. Operator cleans chimneys from the basement, not the dangerous roof.

• NEW NON-CLOG FILTER BAG •

The new Supertex heavy duty suction cleaner filter bag is made of a special porous fabric with high resistance to clogging, and destructive action of acids and chemicals in coal and oil soot and other dusts. These form a fragile film on the inside surface of the Supertex bag. This film breaks down and falls, leaving the pores of the bag material unobstructed and the fabric undamaged.

• Send for the FREE SUPER SALES PLAN BOOK. It tells you how to build a profitable furnace cleaning business. Your wholesaler can give you complete data on the Super Red Streak Model SH. Or write us.

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All models approved by Underwriters' Laboratories and Canadian Standards.

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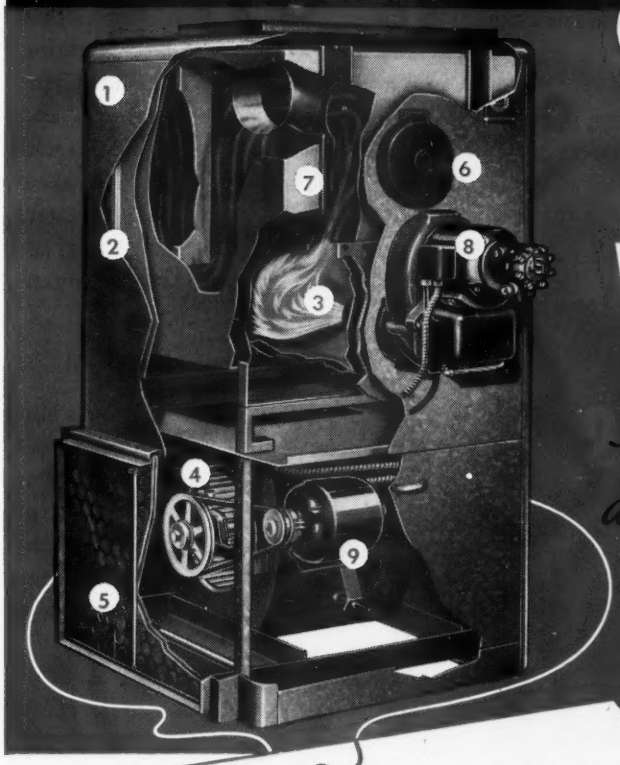
SUPER SUCTION®

SINCE 1911

"THE DRAFT HORSE OF POWER SUCTION CLEANERS"

AMERICAN-Standard
HEATING



THE Winterglo
WINTER AIR CONDITIONER

for small homes and individual apartments

DESIGNED FOR EASY SELLING ... ENGINEERED TO STAY SOLD!

1. JACKET—smartly styled in beautiful Forge Red. Will blend and harmonize with furnishings or decorating plan in any location. All parts die-cut and formed.

2. JACKET LINER—reduces heat loss through the jacket and keeps jacket relatively cool. Improves heat transfer into circulating air.

3. COMBUSTION CHAMBER—made of high temperature stainless steel, specifically designed for each size Winterglo. Design insures maximum life and economy.

4. BLOWER—of double inlet type with large air handling capacity. Unusually quiet. Rubber mounted, self-aligning bearings.

5. FILTERS—effectively remove dust, dirt and other foreign matter from the air. Large filter area is provided. Easily and inexpensively replaced. Frames are located so that filters can be removed from front of unit.

6. OBSERVATION DOOR—with cover, permits observing flame when desired without disturbing combustion or flame characteristics.

7. HEATING ELEMENT—heavy gauge steel construction, with welded seams. Designed to provide maximum heating surface. Radiator has unusually long flue travel created by strategically located baffle, and convenient cleanout openings. Maximum heat transfer results.

8. ARCOFLAME OIL BURNER—specially coordinated flange type. The Arcoflame is efficient and dependable in operation, simple to service. The Winterglo is available without Arcoflame Oil Burner when specified.

9. MOTOR—quiet, durable and dependable. Will not cause radio or television interference. Built-in overload protection. Motor pulley is adjustable.

● Listed for closet installation by Underwriters' Laboratories and approved for less than standard clearance, the compact Winterglo fits perfectly into minimum space in alcove, hall or areaway.

Engineered exclusively for oil firing and available in two sizes, 85,000 and 105,000 Btu output per hour at bonnet, the Winterglo is just the winter air conditioner for small homes and apartments—especially where a first floor or utility room installation is required.

While we recommend that you sell the Winterglo as a complete unit with its own special flange model Arcoflame Oil Burner, it may be installed for use with any suitable oil burner.

For further information about the Winterglo and other winter air conditioners in the Sunbeam line by American-Standard, get in touch with your wholesale distributor.

Factory-assembled and Pre-wired

The Winterglo is both factory-assembled and prewired. Can be installed in a fraction of the time previously required for a job of this type. Will pass through standard doorways. Weighs only slightly more than the average refrigerator or other similar applicances.

THE AMERICAN-Standard LINE MEANS MORE BUSINESS FOR YOU IN '52!

American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

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induced the manufacture of different products, is impaired." No stimulus of price, therefore, has existed and transportation costs have risen so high that "many companies gave up trying to ship heating oil here."

The continuing increase in demand for distillates which can be anticipated for the immediate future and the concentration of this demand in a peak covering three or four winter months, is going to have a profound effect on the oil business, Holman declared. Traditionally the way to meet these demands would be to expand refining and transportation capacity, but even if steel were available, these facilities could be used only in the short peak consuming periods. Such expansion would be uneconomic and would mean that the public would pay more for petroleum products. Holman saw a simpler solution in the principle of keeping "the entire oil supply system—especially refineries, tankers, pipelines and other methods of transportation—operating evenly around the calendar."

And, increased storage is the main factor that can accomplish this. In New England, he pointed, the world's greatest consuming area at the farthest distance from the source of supply, there exists the greatest need to increase storage facilities. It is essential that this be accomplished, he continued, because Standard's affiliate, Esso, reports that more than 85% of the No. 2 heating oil it brings into New England is handled by independent marketers and better than 95% of the kerosene is sold through the same channels. "From our point of view," Holman made it clear, "the continued existence of strong, aggressive and competitive reseller organizations is highly desirable."

Features Make the Difference
This winsome lass and ELECTROL have much in common, both have exceptional features that get results.
You see, Electrol has last-a-lifetime features no other oil burner can match . . . features that bring in plenty of easy big-profit sales because they give more heating comfort and efficiency dollar for dollar—and they are exclusively yours with Electrol's protected Dealer Franchise. And every home, institution and small industry is a prospect for you, because there's an Electrol burner to meet every heating requirement.
Examine Electrol's exclusive features and see why Electrol makes the difference in your oil burner sales. Write for your free Electrol Booklet today.
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FAMOUS BALL FLAME EFFICIENCY
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A FEW CHOICE EXCLUSIVE AGENCIES STILL AVAILABLE—WRITE NOW!
OIL BURNERS • AIR CONDITIONERS • WATER HEATERS • BOILERS

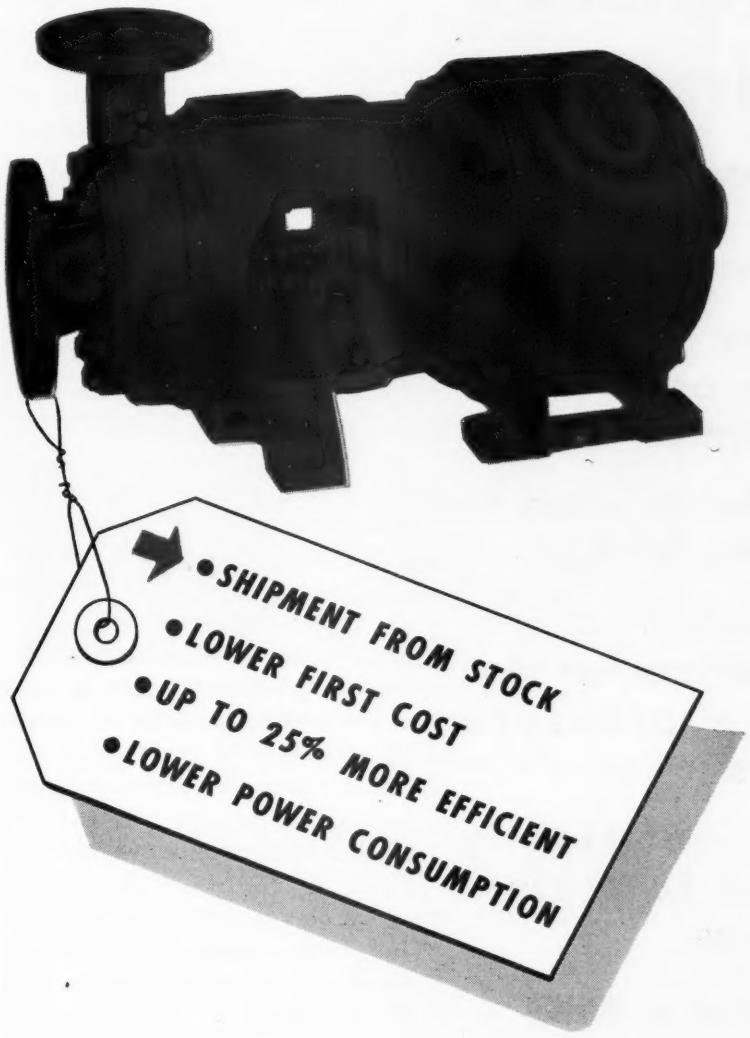
Two forum Sessions held

Morning and afternoon forums also were included in the program, the former featuring the theme "Modern Tools—modern Business." John Harper, president of the National Oil Jobbers Council and president of Harper Oil Co., Long Island City, N. Y., was the first speaker and described the growing importance of the role of the independents in the oil industry. He gave brief details of the function of the NOJC, consisting of 23 associations, representing jobbers in 24 states and enumerated six reasons why it is beneficial for jobbers to belong to independent groups:

1. They have an opportunity to compare notes privately with other jobbers on common problems.
2. They can learn the thinking of suppliers.
3. They learn about the latest operating techniques.
4. They hear in advance about new and proposed regulations and legislation that will affect their businesses.
5. They can discuss and adopt new schemes by which they can profit by group action, notably insurance plans and cooperative purchasing.
6. They are able to develop the thinking of their own group in relation to the practices of their suppliers.

L. T. White, manager of business research and education for the Cities Service Oil Co., was the second speaker at the morning forum on the subject "Developing your Men builds Profits." His address stressed the importance of business education since

speed tank and truck loading



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Ingersoll-Rand Motorpumps are available for immediate delivery from large stocks. Warehouses and service engineers in all principal cities are ready now to meet your needs. Call your nearest I-R representative or distributor today. INGERSOLL-RAND COMPANY, 11 Broadway, New York 4, New York.

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available in sizes from ¼ to 50 hp.

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"Education has meant progress and progress has fostered the purchase of 50 million automobiles, to whose owners we can sell gasoline; the purchase of more than 5 million oilburners so we can sell fueloil. In short, education has been instrumental in the development and growth of the oil industry."

A portion of White's talk was devoted to the new handbook issued by the Division of Marketing of the American Petroleum Institute, covering ways and means of training marketing personnel.

In explaining the many training aids that are available, White explained that probably the most concrete help can be derived from contact with local and state boards of education. To emphasize this point he introduced Harold Shapiro, Massachusetts State Supervisor of Distributive Education, who briefly related what facilities can be made available to oil jobbers in Massachusetts and the other New England states, and described how vocational training programs can be established.

Public Relations was the subject of the afternoon forum, moderated by Thomas Holton Hoare. He told how individual companies can operate their own public relations programs effectively with publicity, advertising, employee relations, community relations and customer relations.

John Goodman, district representative, Oil Industry Information Committee, treated the topic from the standpoint of the OIIC, detailing the activities of the committee and telling how individual oil companies can use the program.

Practical public Relations

William F. Briggs, president, Valley Oil Co., Middletown, Conn., covered public relations and its importance to the small company. He described how his company improves public relations by keeping the company name before the public, capitalizing locally on the effect of national advertising by the manufacturers of the oilburners it handles, selling his company to the community by such methods as featuring a different employee in a weekly news letter and always selling something on the assumption that "public relations or advertising means nothing without tangible results."

Concluding the forum were remarks by George Kangisser, Eastern Oil Co., Inc., Worcester, Mass., who contended that nothing could minimize the importance of aggressive salesmanship, good management and better merchandising to insure profits. He said that the question of profits becomes academic unless there remains free customers to whom sales can be made and viewed public relations not as a means "to prove that the free enterprise system is going to mean more dollars to you and me, but to convince the public that the free enterprise system is best for them."

John Scott of *Time* magazine, author and foreign correspondent, spoke at the annual banquet on "The Press and the Cold War."

Horace E. Davenport, president of IOMA and president of G. W. Pickering Co., Salem, Mass., presided at the luncheon and dinner. Arrangements for the annual meeting were handled by Donal M. Sullivan, executive secretary of the association.

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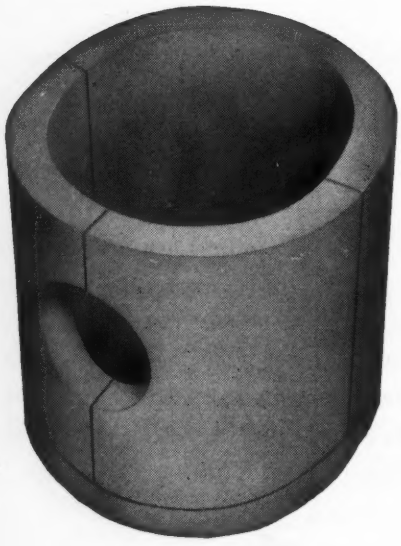

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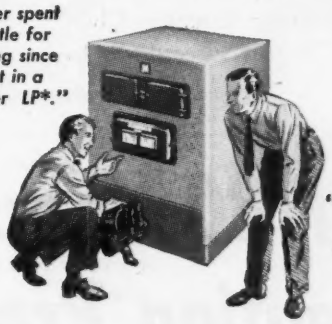

"Never spent so little for heating since I put in a Winkler LP."*

"What an oil burner—where'd you buy it?"

Winkler dealers have an *unpaid sales force* numbering tens of thousands . . . producing a steady flow of extra profits! These salesmen are the people who have bought Winkler Heating Equipment and recommend it to others.

Why? Because the outstanding performance of Winkler Automatic Heating Equipment makes *genuine friends*—eager to spread the good news!

For example, consider the Winkler LP Oil Burner —a *low pressure* unit making phenomenal fuel savings the country over. Next, look at the Winkler line of Furnaces and Boilers—featuring the exclusive Econ-O-Flow design which assures more heat for less money.

And finally, the Winkler Training Institute—free to all Winkler dealers. Here dealers are shown not only how to sell Winkler Heating Products, *but also how to install them for maximum comfort and economy*.

All of this adds up to *satisfied users!* A satisfied owner means an enthusiastic booster . . . and boosters mean extra business. In proof, look at Winkler sales —rising steadily year after year.

Better write today for full information.

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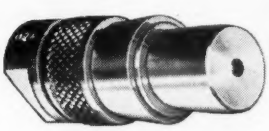

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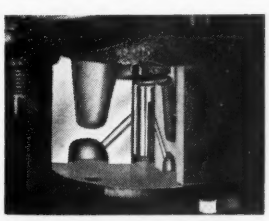
GUARANTEED 10 YEARS

Match this guarantee if you can! The Winkler Nozzle ends fuel waste—permits exact sizing of the burner to the heat requirements of the building.



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GUARANTEED 3 YEARS

Another Winkler stand-out. Intimately premixes oil and air—always meters the same amount of oil regardless of viscosity.

The Winkler Sales Training Schools are free to all Winkler dealers. Write for details.

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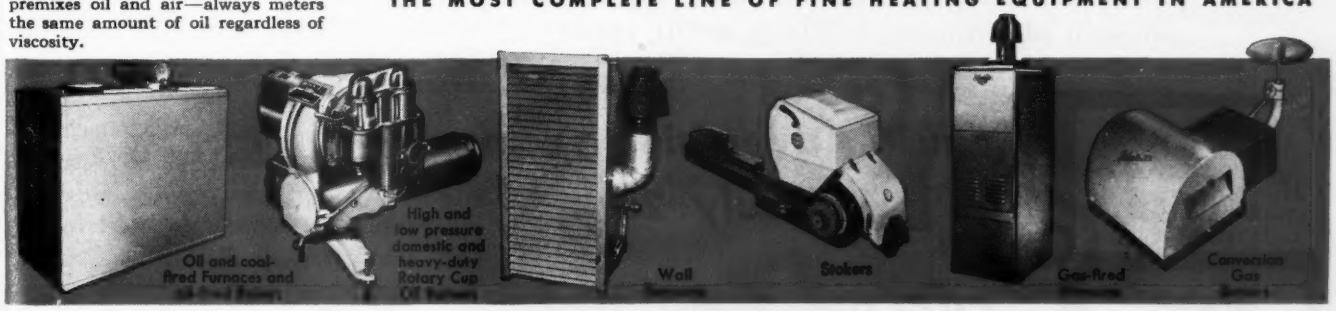

Ask about the Winkler Free Sales Training School

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Automatic Heating Equipment

U. S. MACHINE CORPORATION

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Peoples named President at annual Meeting of I-B-R

WESLEY J. PEOPLES, president and chairman of the board, United States Radiator Corp., Detroit, Mich., was elected chairman of The Institute of Boiler and Radiator Manufacturers at its 37th annual meeting held recently at the Westchester Country Club, Rye, N. Y. Peoples succeeds S. K. Smith.

Robert S. Waters, president, National Radiator Co., Johnstown, Pa., was elected vice-chairman. R. E. Ferry, general manager of the Institute was re-elected treasurer.

Ninety-five members, associate members and international members attended the meeting and expressed general optimism on business conditions. It was the consensus that with the re-establishment of a seasonal pattern of sales, the volume of business in 1952 would equal or exceed that of 1951.

In contrast to 1951 when sales during the first quarter were exceptionally heavy, business during 1952 is tending to approach the normal pattern in which approximately 30 per cent of heating products are sold during the first half of the year and 70 per cent during the last six months.

This upward trend was also reflected in Ferry's statistical analysis of the industry based on a study of the sales of low pressure heating boilers. Ferry said that in 1951 a total of 316,000 low pressure cast iron and steel boilers were sold as compared with 246,000 in 1949, an increase of 28.5 per cent over 1949. This can be compared with an increase of 20.1 per cent for warm air furnaces for the same period.

Ferry also reported on the enrollments and other results of the I-B-R School of Modern Heating. In two years of operation, there were 85 Schools with an enrollment of 4,491 students. There are I-B-R trained students in 1,142 cities and towns in 35 states.

Members of the Institute approved the publication of a new I-B-R testing and rating code for indirect water heaters of the external type and it was announced at the meeting that 10 companies have published I-B-R ratings on baseboards.

Francis E. McArdle, chief, heating branch, Building Materials Div., National Production Authority, told the Institute that it may be that the present restrictions on the use of steel and aluminum for heating equipment will be eased by January 1, 1953. The outlook for increased allotments of copper and nickel bearing stainless steel is not good in the foreseeable future. Allotments of steel for the third quarter will be 82 per cent of base period as compared with 72 per cent in the second quarter. McArdle also told the Institute that scrap steel will be decontrolled during the fourth quarter.

Continuation of the I-B-R Research Program at the University of Illinois

After 30 Years of Oilheating Progress:

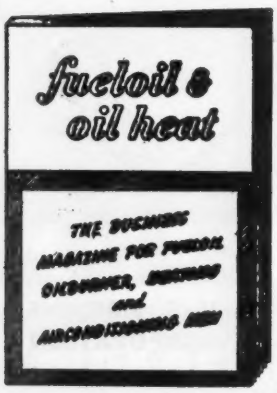
Where are the brands that still survive?

. . . they're in the Advertising Index of FUELOIL & OIL HEAT

It's more than a coincidence that the few pioneer oilheating brand names that still survive are those that over the years have been consistently advertised in FUELOIL & OIL HEAT.

Where will *your* brand name be in 30 years? Or 20 years? Or even *next* year? *The time to protect it is NOW!*

Today as ever, the fueloil-oilheating field is one vast parade—every day new dealers enter the field, others grow and change lines, while some drop out of sight entirely. Keep pace with this changing industry—begin now to protect and build your brand name's reputation through consistent advertising in FUELOIL & OIL HEAT!



August Advertising Forms Close July 25th

FUELOIL & OIL HEAT

2 West 45th St. New York 36

(MUrray Hill 2-4786)

WHY NICK LUDWIG LIKES "FLOORLEVEL"

Chicago, Ill.

Gentlemen:

It is with the greatest enthusiasm that I recommend General Automatic "Floorlevel" Baseboard Hot Water Heating.

We have installed various types of both cast iron and copper baseboard and find that *yours is far superior*, both from the standpoint of operating efficiency and cost of installation over any type we have tried.

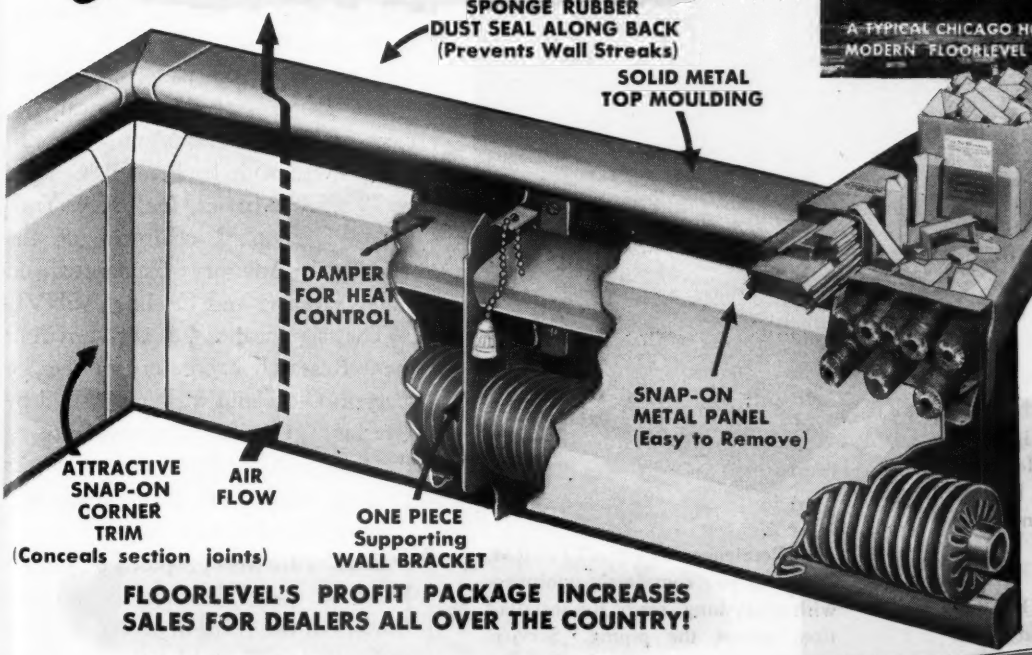
We have found it to be *very adaptable to conversion work* in old houses inasmuch as it can either be used over the existing baseboard or in place of same.

We have *nothing but good comments* on all jobs we have done. This alone sells us on the idea, plus the fact that we have found that the *ease of installation* has put us back into the wet heat picture here in Chicago.

Yours sincerely,
"Nick" Ludwig

floorlevel

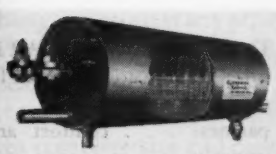
HOT WATER BASEBOARD RADIATION



FLOORLEVEL'S PROFIT PACKAGE INCREASES SALES FOR DEALERS ALL OVER THE COUNTRY!

A COMPLETE PACKAGE

Including . . . fin-type heating element, front panel and top moulding—packaged in convenient 10 ft. lengths. Wall brackets, inside corners, outside corners and splices.



DUAL DE-AIRATOR TANK
A positive eliminator of air blocks in forced hot water systems.

EASY HANDLING

The compactness of Floorlevel's all-in-one package means easier handling. One Michigan distributor installed 2200 sq. ft. of radiation with only one small truckload of Floorlevel.

ECONOMICAL

No special tools are required; all parts are standard and quickly obtainable. Save labor, save time and save money with Floorlevel.

SEND FOR SPEC. 56

General Automatic also offers you the circulator, flow control valve, and boiler-burner unit designed to work best with Floorlevel Hot Water Baseboard Heating.

Spec. 56 gives you the complete details on the G/A Profit Package.

GENERAL Automatic
GENERAL AUTOMATIC PRODUCTS CORP.

General Automatic Products Corp.
2300 Sinclair Lane, Baltimore 13, Md.

— now in its 12th year — was approved by the members. In reporting on the research program, Warren Harris, research professor at the University of Illinois, said that the I-B-R Research Program for the 1951-1952 heating season consisted of two major projects. First was an investigation on the performance of floor panel heating systems. Second was a study of the heating effect of radiators, convectors, and baseboards under actual use conditions.

Results that the University found in its tests were that insulating the entire underside of the slab reduced the heat flow into the ground by approximately three per cent and made a corresponding increase in the rate of heat flow into the room. There was little or no difference in the effectiveness of the two types of insulation used.

It was also found that a panel system has the desirable characteristic of automatically increasing heat output near points of high heat loss.

The total temperature difference from the floor to the ceiling in a panel-heated room was less than one degree Fahrenheit in the rooms studied. The temperature of the exposed north wall was found to be approximately the same as the room air temperature. The other walls were some three to five degrees Fahrenheit warmer than the room air.

"Heating Effect"

"While the program is only half completed," Professor Harris said, "the results we have obtained thus far seem to demonstrate that 'heating effect' is more a function of the way the equipment is used than it is a function of the design of the equipment. This being the case it would not seem that 'heating effect' allowances should not be made to catalogued output ratings of a piece of equipment.

"By continuing this program through the next heating season, we should obtain information necessary to show whether or not 'heating effect' allowances are justified for actual usage conditions."

A report on the panel heating research program of the American Society of Heating and Ventilating Engineers was made by Peter B. Gordon of Wolff & Munier, Inc., New York City. Gordon is chairman of the Technical Advisory Committee on Panel Heating and Cooling ASHVE.

The significance of the Environment Research Laboratory of the Society in Cleveland was emphasized by Gordon. Careful measurements of the heat transfer from warm surfaces to space can be carried out at the laboratory, Gordon said.

Studies are also proposed on the relation of panel heating to comfort. Studies of the relation of various control systems to panel heating are being carried out.

An advance Short Course in Hot Water and Steam Heating will be given at the University of Illinois, Urbana, Ill., September 9, 10 and 11. The emphasis in the Short Course will be on the application of the methods taught in the I-B-R Installation Guides to the design and installation of hot water and steam heating systems in small commercial buildings.

Why More Dealers Are Changing to the *Bethlehem* DYNATHERM

★ FASTER SALES

★ BIGGER PROFITS

★ MORE FEATURES

The Bethlehem DYNATHERM gives your customers more for their money in fuel economy . . . in compactness . . . comfort and convenience.

The Bethlehem DYNATHERM offers all the features that make your sale easier . . . The Whirling Flame . . . Unit Engineering . . . "Thermos Bottle" Insulation . . . Beautiful Cabinet.

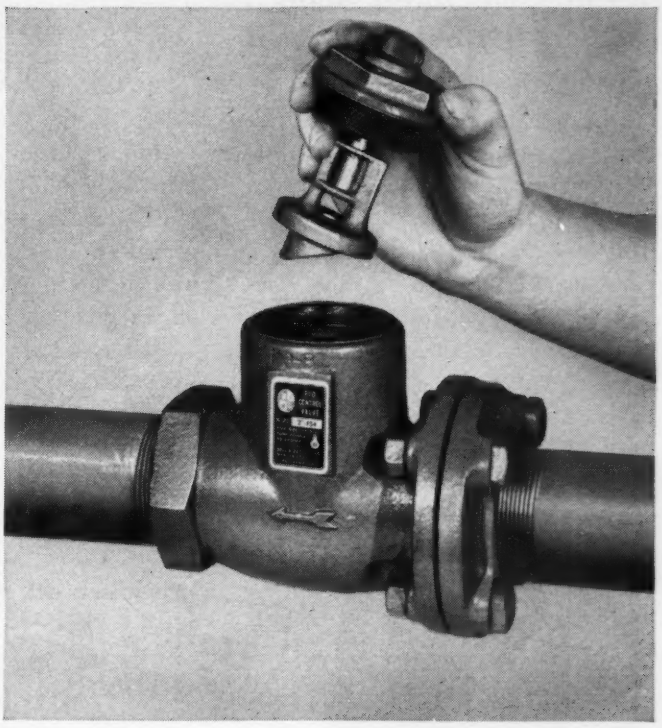
The Bethlehem DYNATHERM comes to you completely equipped with everything, ready for installation, except the piping. Service expense is minimized. Backed by a 120-year-old organization of broad experience in the field of heat production and transfer.

A few exclusive Bethlehem Dynatherm territory Franchises are still available. Wire or write immediately for full information.

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

ANGLE PATTERN

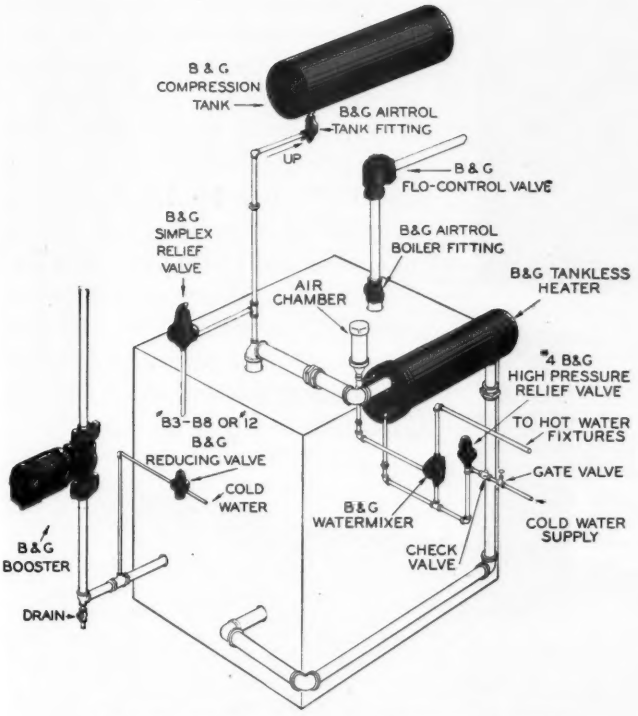
STRAIGHT PATTERN



Why it's better to buy

B&G FLO-CONTROL VALVES

. . . easily cleaned without breaking pipe connections



B & G *HYDRO*-FLO EQUIPMENT PROTECTS YOUR MOST VALUABLE ASSET—*CUSTOMER SATISFACTION!*

Everything you need for forced hot water heating systems and domestic water heating. Look for the B & G label—symbol of quality.

It's a tough job to clean a flow control valve if you have to take it out of the line. Avoid trouble—always install B & G Flo-Control Valves!

By simply unscrewing the top cap, the entire mechanism can be lifted out and the seat cleaned . . . all without breaking pipe connections. Could anything be quicker or easier?

B & G Flo-Control Valves are made in both angle and straight patterns, enabling you to meet any piping problem in the most convenient way. Both types can be quickly adjusted for either automatic operation or for gravity circulation.

The B & G Catalog gives complete size and capacity information—send for your copy.

Hydro-Flo PRODUCTS

BELL & GOSSETT

COMPANY

Dept. CO-7, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto, Canada

*Reg. U. S. Pat. Off.

fuel oil & oil heat

Washington Survey shows 43.7% of Homes oilheated

THE 1952 CONSUMER ANALYSIS, survey of the Greater Washington, D. C. market completed in January by *The Washington Star,* included a question asking "How is your home heated?" This was one of the questions on a questionnaire returned by 5,000 families containing details on brand preferences and products used. The area surveyed included the District of Columbia, all of Arlington County and Alexandria in Virginia, parts of Montgomery and Prince Georges Counties in Maryland.

A total of 156,498 families were involved in the projection of the answers on home heating, 43.7% of whom said they used fueloil, a total of 68,321 families, and compared with a percentage of 41.0 last year. Gas was used for heating by 46.1%, or 72,074 of the families, in contrast with the 25.9% last year who reported they were gasheating consumers. Coal or coke accounted for only 10.2%, 15,947 families, in the survey this year, a substantial drop from the 31.5% who said they used coal for heating in 1951. A total of 156 families, 0.1%, said they did not know what type of heating they had.

A breakdown of makes of oilheating units owned by families covered in the survey shows that Delco, Timken and Quiet May, the three leaders, are installed in nearly 17% of the 68,321 oilheated homes. A total of 11,341 reported they did not know the make of burner they were using; 19,676 brands, including those owned by less than 1% of the families, were grouped in a miscellaneous category and the remainder, 25,963 burners and units, were distributed among 18 different manufacturers.

International Economy® Counterflo Heater

For Oil and All Gases (Nat., Mfd., Mixed and LP)

Only 23" square and 67" high, this Underwriters' and AGA approved International Economy Winter Air Conditioner can be installed practically anywhere—closets, alcoves, utility rooms. There's a huge potential for this Counterflo unit in the new small home market—for perimeter heating . . . for duct systems in homes with crawl space beneath the floor . . . for systems where entire crawl space is used as a plenum chamber. The International Economy Counterflo with its 100,000 B.t.u. oil heat output and 96,000 B.t.u. gas heat output covers them all. It's *convertible*, too!

Call your distributor now, or write us—cash in on this highly efficient unit for those *tight* installations . . . perfect for you and your customers.

110 years of heating experience at your service . . . with a complete line of gas, oil and coal-fired units.

Easy to install, too!

The burner, flue outlet, controls, motor, blower and larger sized cleanouts are all readily accessible from the front. It's a completely packaged unit—shipped factory assembled — one fan and limit control and an auxiliary limit control are supplied and *factory set* for *double* protection—in addition to the standard controls.

INTERNATIONAL HEATER COMPANY
UTICA 2, NEW YORK
Western Office and Warehouse • 1933 Wentworth Ave., Chicago 16, Illinois

❖

Fuel Preferences shown for fifteen major Markets

INFORMATION on product use and brand preferences collected in Consumer Analyses conducted by newspapers in fifteen major markets early this year has been consolidated in one report. The individual surveys were based upon 37,900 individual questionnaires completed by representative families covering more than 300 separate subjects. Questions were worded identically to provide comparability.

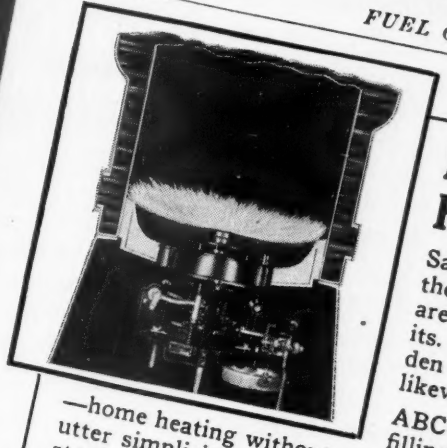
Fuels used for home heating were analyzed in each marketing area, based upon 1952 data. Five of the markets included the percentage of families using electricity for heating, as follows: Fresno, 2.8%; Modesto, 1.3%; Sacramento, 3.1%; Seattle, 1.7% and Spokane, 1.2%. The percentages of families whose homes are heated with oil, gas and coal or coke are shown.

	Oil	*Gas*	*Coal, Coke*
Milwaukee	28.3%	21.1%	51.0%
Indianapolis	40.0	7.4	52.3
St. Paul	55.9	18.5	25.6
Duluth-Superior	40.9	5.7	53.4
Columbus	1.8	56.1	39.4
Omaha	31.5	39.4	29.3
Washington, D. C.	43.7	46.1	10.2
Salt Lake City	5.2	67.3	27.5
Fresno	4.6	93.1	..
Modesto	2.5	96.6	..
Sacramento	3.7	92.7	..
San Jose	1.4	97.0	1.6*
Seattle	79.7	4.1	14.5**
Spokane	41.6	..	62.2**
Portland, Me.	61.2	3.9	34.9**

*Percent includes electricity.
**Percent includes wood.

True in 1922... Still true 30 years later

October, 1922 FUEL OIL 85



More Dollars For You!

Sales representatives of the ABC Oil Burner are making great profits. Here is your golden opportunity to do likewise.

ABC Oil Burners are filling a long-felt want —home heating without waste, dirt or bother. Their utter simplicity and correctness or principle are instantly recognized.

Unlimited Possibilities

Every home owner is a friendly, half-sold prospect for the ABC. So obvious and amazing are its superiorities that it practically sells itself.

ABC is far beyond the experimental stage. It is presented today as the unquestioned leader in the oil burner field. Actual try-outs under the most rigorous conditions have proved its ability—its amazing power—its continuous, trouble-free operation.

Inquiries are flooding our offices from all parts of the country. We need men in the local field to properly represent us. Can you qualify?

Write today for full information and liberal offer. Tell us something about yourself. Do it now! Delay means actual loss to you.

AUTOMATIC BURNER CORPORATION
2309 Lincoln Avenue, Dept. C. Chicago, Illinois

While today's phraseology might be more restrained, a little more subtle, the general, straightforwardness of the claims made in 1922 —in A B C's first advertisements—could be repeated today with equal truthfulness. The advertisement reproduced here appeared in the October 1922 issue of Fuel Oil.

ABC OIL BURNERS

AUTOMATIC BURNER CORPORATION
1823 CARROLL AVENUE • CHICAGO 12, ILLINOIS

UNIVERSITY OF MICHIGAN LIBRARIES

Oilheating most popular in the Spokane Market

THE SIXTH ANNUAL REPORT of the *Spokesman-Review* and the *Spokane Daily Chronicle*, Spokane, Wash., contains in its 1952 Consumer Analysis of the Spokane market a comprehensive report of product usage, equipment ownership and brand preferences among urban families living in the trading area served by both newspapers. The total area covered included the Spokane City Zone and 12 representative urban communities in the Spokane Urban Outside Market, extending within a 150 mile radius of Spokane.

The survey revealed that oil is by far the most popular fuel for heating, retaining the lead it displayed in last year's survey. In the total market oil is used for heating in 87,430 homes, 57% of all families, comparing with 75,450 families in 1951, 53% of the total. Coal is second this year, as well as last, 45,980 families or 30% of total this year and 50,770 families, 35.6% of total in 1951. Wood was next, 2,500 families, 14% of the total, indicating they used this method for heating, an increase from 17,500 families last year.

Electricity is used by 3,140 families, 2% of total, another increase since electricity was used for heating by only 1,360 families in 1951. Gas for heating is available only in the urban outside market and here 520 families, 0.3% of total use it, but this represents a drop from the 730 families, 0.5% of total, who used it for heating in 1951. Coke is at the end of the list, only 260 families, 0.2% of total, using it for heating now, down from 620 families, 0.4% of total, in 1951. The number of families covered in the survey this year totaled 153,290, compared with 142,490 in the 1951 Analysis.

Type of Fuel used

	Spokane City Zone		*Spokane Urban Outside Market*	
Total Families	57,940	56,670	95,350	85,820
Oil	24,080	20,650	63,350	54,800
Coal	29,250	32,330	16,730	18,440
Wood	6,510	5,070	14,990	12,430
Electricity	670	310	2,470	1,050
Gas	..	..	520	730
Coke	260	360	..	260

Details of the number of families using the various fuels are shown in the table for the Spokane City Zone and the Urban Outside Market. Together, of course, these make the totals quoted in the preceding paragraphs.

❖

Milwaukee Newspaper checks home Heating

THE 29TH CONSUMER ANALYSIS, conducted by the *Milwaukee Journal* and completed early in January, shows that gas for homeheating registered the strongest gains in 1951. As of the first of 1952 gas for heating was used in 21.1% of the homes in the greater Milwaukee market, a total of 56,358, having increased from 34,334 homes or 13.2% of the market shown in the

INSTALL A GENERAL FUEL OIL FILTER ON EVERY HEATING SYSTEM YOU SERVICE

Because: GENERALS assure clean, safe fuel oils for your customers—stop costly "call-backs" for you

1. Positive absorption with GF's double filter element. Finest felt cartridge removes the finest dirt particles. Inner wire mesh strainer prevents collapse, backs up cartridge.
2. Two-minute felt cartridge replacements mean easy service revenue for you for years to come.
3. Your customers will WANT GENERAL FILTERS and the clog-free protection they offer the year 'round by trapping impurities before they reach burner nozzles.
4. There's a GENERAL FILTER model to fit every need . . . small or large . . . home, business, trailer, etc. All that's needed is a wrench and a few minutes' work.

Remember: . . . a ⅛ inch layer of soot raises heating costs up to 25%! CLEAN RIGHT SOOT REMOVER cleans any system quickly, safely — leaves no residue.

GENERAL FILTERS INCORPORATED
GENERAL FUEL OIL FILTERS
12890 Westwood Ave. Detroit 23, Michigan
CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO 13, ONTARIO

A Complete Line of Warm Air Furnaces

- For Gas, Oil, Coal and L. P. Gas
- Gravity and forced air types
- Hi-Boy, Lo-Boy, Counter-Flow and Horizontal Units

A Complete Line of Pipe and Fittings

Forced Air Duct Systems
- Reduction System Fittings
- Extended Plenum System Fittings
- Perimeter System Fittings
- Small Pipe System Fittings

Forced Air Fittings for:
- Floor
- Baseboard
- Sidewall
- High Sidewall

Gravity Fittings for:
- Floor
- Baseboard
- Sidewall
- Pipe, Elbows and Angles

All fittings die-cut and cartoned

National Advertising

American Home
Better Homes and Gardens
House Beautiful
House and Garden
Living for Young Homemakers
Small Homes Guide
Successful Farming

Complete Line Catalog

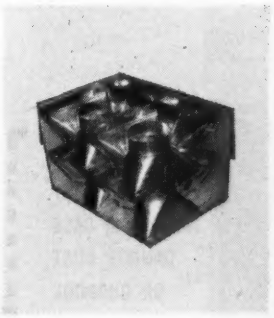
A 104 page quick reference catalog on everything you'll ever need in furnaces and pipe and fittings. All under one cover.

For Bigger Profits

WILLIAMSON
WARM AIR HEATING SYSTEMS

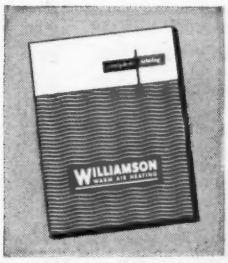
Complete Line

Over 100 models of gas, oil, coal or LP gas fired furnaces are available for any size home, small or large, new or old. Attractive in appearance, efficient in operation and competitively priced—WILLIAMSON furnaces are designed for fast installation, dealer profit, and home owner satisfaction. A line of gas and oil conversion burners and coal stokers round out a product picture attractive to dealers interested in quality equipment purchases from one reliable source.



Like the equipment line, the WILLIAMSON Pipe and Fittings line is just as complete. There are Small Pipe systems, conventional size pipe and fittings, all *die-cut* for absolute uniformity and perfect fit. Zip-Slip joints make up tighter, straighter and faster than any other type. WILLIAMSON Pipe and Fittings are "packaged" in easy to handle cartons for warehousing, storing and quicker inventory taking. Time, labor and space are materially reduced with WILLIAMSON fittings.

WILLIAMSON dealers are backed by a complete hard-hitting national advertising campaign in the leading home publications—real live inquiries to follow-up.



WILLIAMSON dealers can find the product and data they want in one complete catalog covering equipment and pipe and fittings. No dozens of catalogs to thumb through.

A WILLIAMSON Dealer is a PROFITABLE Dealer. Why don't you Join the Ranks Too?

THE WILLIAMSON HEATER CO.
DEPT. FO-7 3500 MADISON RD. CINCINNATI 9, OHIO

UNIVERSITY OF MICHIGAN LIBRARIES

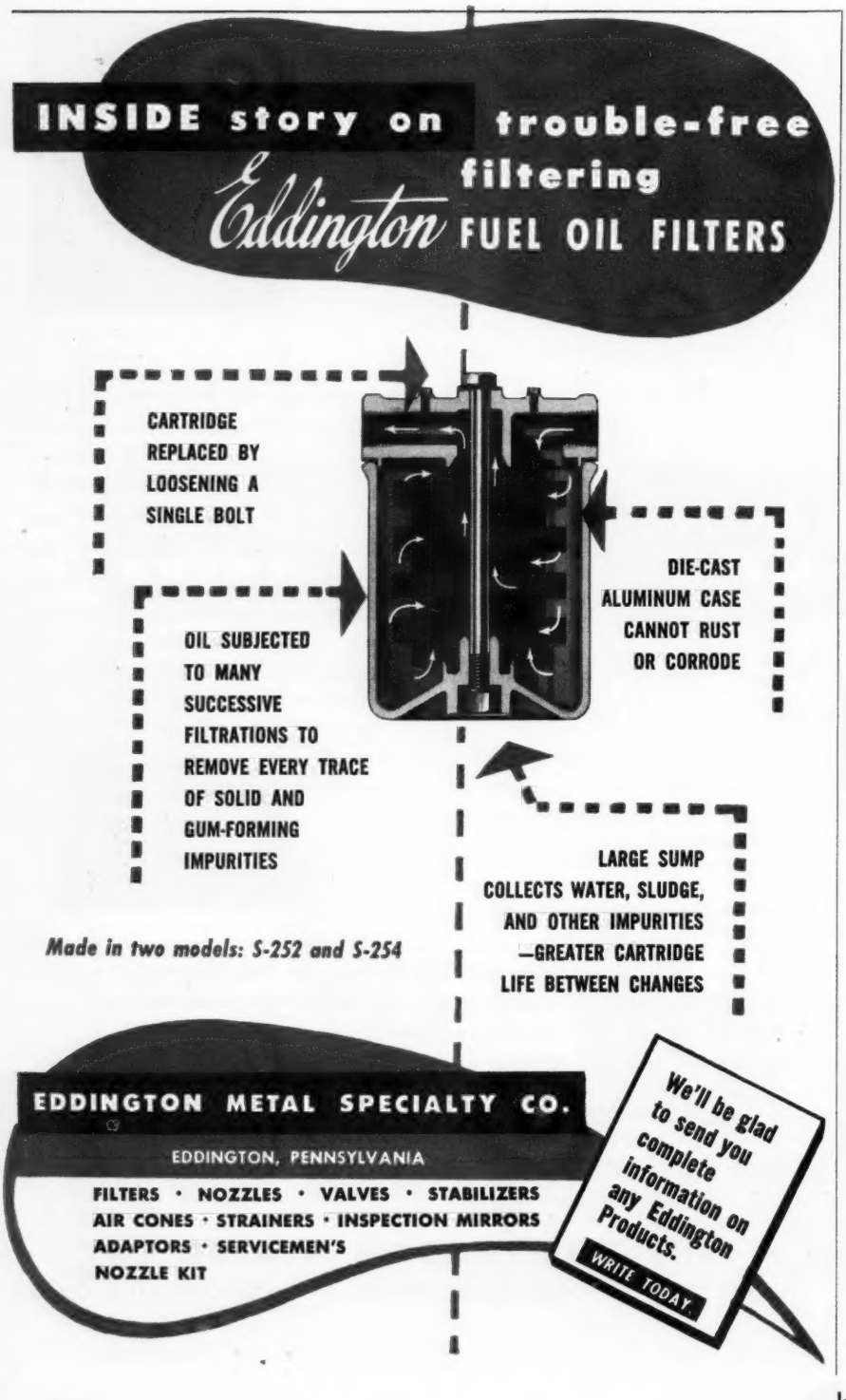
previous year. For the same periods oilheating increased to 75,589, 28.3% of the total, registering only a slight gain from the 72,049 homes, 27.7% of total, recorded as of the first of 1951. Coal for heating continued to decline, accounting for 136,221 homes, 51% of total, contrasted with 155,803 or 59.9% of the market, the previous year.

The table shows the trend of fuel preference for homeheating over the past four years in the greater Milwaukee market.

	—Coal or Coke—		—Oil—		—Gas—	
Year*	%	No.	%	No.	%	No.
1952	51.0%	136,221	28.3%	75,589	21.1%	56,358
1951	59.9	155,803	27.7	72,049	13.2	34,334
1950	70.7	179,585	25.2	64,010	4.8	12,192
1949	77.4	189,500	19.7	48,256	4.2	10,288

*Refers to the date of the study and covers sales for the previous year.

Mueller Climatrol, Heil and Sears were the three leading makes of oilheating units reported by homeowners in the 1952 Analysis. Together these three made up almost 24% of the 75,589 oilheating units in use. A miscellaneous category accounted for 21,014 or 27.8% of total units, divided among 123 different makes and 8,768 or 11.6% of the homeowners reported they did not know the make of oilheating unit they had. The remaining 27,737 oilburners and units were split among 23 different makes.


INSIDE story on trouble-free filtering
Eddington FUEL OIL FILTERS
CARTRIDGE REPLACED BY LOOSENING A SINGLE BOLT
OIL SUBJECTED TO MANY SUCCESSIVE FILTRATIONS TO REMOVE EVERY TRACE OF SOLID AND GUM-FORMING IMPURITIES
DIE-CAST ALUMINUM CASE CANNOT RUST OR CORRODE
LARGE SUMP COLLECTS WATER, SLUDGE, AND OTHER IMPURITIES —GREATER CARTRIDGE LIFE BETWEEN CHANGES
Made in two models: S-252 and S-254
EDDINGTON METAL SPECIALTY CO.
EDDINGTON, PENNSYLVANIA
FILTERS · NOZZLES · VALVES · STABILIZERS
AIR CONES · STRAINERS · INSPECTION MIRRORS
ADAPTORS · SERVICEMEN'S NOZZLE KIT
We'll be glad to send you complete information on any Eddington Products.
WRITE TODAY

U. S. Department of Labor Fueloil Prices (April)

FIELD INVESTIGATIONS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published, including applicable state and local taxes. Those in the table that follows were taken April 15 (cents per gallons):

	Range	No. 1	No. 2	No. 3
Boston	15.07	14.57	12.60	..
Manchester	15.40	14.90	13.30	..
Portland, Me.	14.40	14.40	12.40	..
Buffalo	15.25	..	14.04	14.04
New York	..	..	12.71	..
Philadelphia	..	13.43	12.20	..
Chicago	14.83	14.48	13.57	13.57
Detroit	..	15.04	14.01	..
Milwaukee	..	15.04	14.10	14.00
Kansas City	..	13.06	12.04	12.04
Minneapolis	14.77	14.53	13.48	13.53
Baltimore	..	13.36	12.44	..
Wash., D. C.	..	13.84	12.85	..
Jacksonville	..	14.87	13.25	..
Norfolk	..	13.60	12.20	12.20
Richmond	..	14.00	12.60	..
Savannah	..	16.58	13.97	..
New Orleans	..	13.33	12.77	12.77
Denver	..	14.42	13.32	..
Portland, Ore.	..	14.50	12.10	..
San Francisco	..	13.87	11.54	..
Seattle	..	15.33	13.20	..

Socony Burner Group holds first Reunion

THE FIRST REUNION of the old Socony Burner Group was held on April 17 at the Benjamin Franklin Hotel, Philadelphia, Pa. Alan E. Burns, Burns Heating Supply Co., 28-31 Thomson Ave., Long Island City 1, N. Y., who sent in the accompanying picture, would like any other former Socony men to send him their names and ad-

Approved for GAS!

Approved for OIL!

Luxaire®

HEATING AND AIR CONDITIONING UNITS

AVOID lost sales!

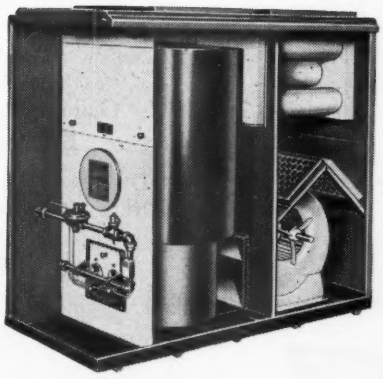
AVOID delays!

AVOID frozen or slow moving inventories with *Luxaire!*

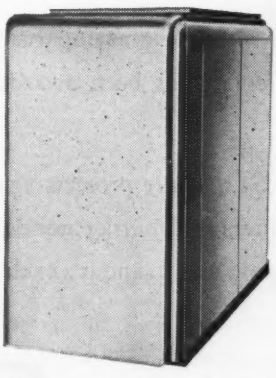
YOU can be independent of fuels with most Luxaire Furnaces and Air Conditioning Units because they have been designed to burn either Gas or Oil with equal efficiency! Luxaire Units with Luxaire Gas Burners carry the A. G. A. seal of approval . . . The same Luxaire Furnaces and Air Conditioning Units with Underwriters Laboratories approved Luxaire Oil Burners are equally as efficient as the Gas Fired Units!

. . . INSTALL the furnace NOW without the burner!

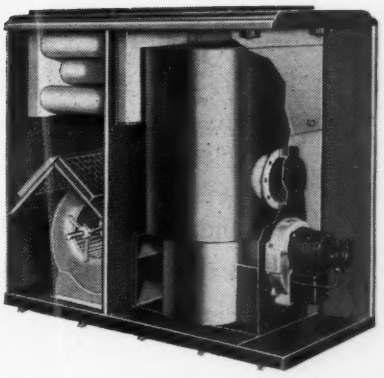
Wait until cold weather arrives before you decide on Gas or Oil. OR—INSTALL OIL *NOW* and CHANGE TO GAS anytime in the future—OR INSTALL GAS *NOW*, and CHANGE TO OIL anytime in the future.



The Luxaire Gas Fired basement air conditioning unit.



Front view of Luxaire basement air conditioning unit.



The Luxaire Oil Fired basement air conditioning unit.

THE *Luxaire* C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

HEATING & AIR CONDITIONING UNITS

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dresses to make his records complete.

About the reunion, he says, "It has always seemed to us that the Socony Burner Company, one of the pioneers in the oilburner business, actually did an outstanding training job on many of the men who have since remained in the industry. The unfortunate thing is that the Socony group was never organized or kept together and has spread so widely that it is difficult to locate the members."

The Socony Arrow oilburner, first made in 1924, later was sold to the Timken-Detroit Co. in 1928.

In attendance at the reunion were, left to right: William O. Dodge and Henry C. Taylor, Dodge-Taylor Co., Hempstead, N. Y.; William O. Niccolls, Riverdale Sales and Services, Bronx, N. Y.; Frank Ammon, Minneapolis-Honeywell Regulator Co., New York; Louis Hirsch and Allen Fiske, Westchester Service Co., Yonkers, N. Y.; Edward Haugen, Timken Silent Automatic Div., Detroit, Mich.; Alan E. Burns, Burns Heating Supply Co., Long Island City, N. Y.; N. H. Richfield, American Radiator and Standard Sanitary Corp., Pittsburgh, Pa.; Jack Horton, Horton Heating Co., Albany, N. Y.; Milton Powers, Timken Silent Automatic Div., Detroit, Mich.; William S. Brown, Minneapolis-Honeywell Regulator Co., New York City; Ralph Sager, Sager Oil Co., Albany, N. Y. and standing, W. S. Howland, Fluid Heat, Philadelphia and A. T. Kline, Edward R. Sabin Co., Philadelphia.

❖

E. J. Gallmeyer was elected a director of Blackmer Pump Co., Grand Rapids, Mich., at a board meeting of that company held recently. Gallmeyer will also serve as management consultant of marketing for Blackmer pumps. Gallmeyer in his early years acted as territorial manager for S. F. Bowser Co. and Wayne Pump Co. Later he became vice-president and director of sales of Wayne Pump Co. He continued in this capacity until 1949, retaining officer and board status and served in an advisory capacity.

YOU

should know...

Sinclair Anti-Rust Fuel Oil – with the amazing rust inhibitor, RD-119 – is so different it has been awarded a U. S. Patent.

Used regularly, this great fuel oil *actually* protects against rust and corrosion that clog filters and burner nozzles... reduces service calls... builds good will... and it's exclusive with Sinclair!

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FUEL OIL WITH RD-119®

ANTI-RUST Super Flame ®

no song and dance needed

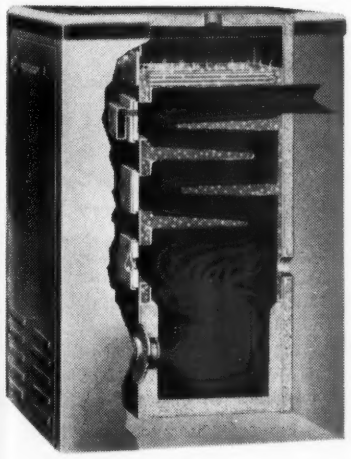
easily understood features sell

COLUMBIA

boiler-burner units!

You don't need a time step to sell time-proven Columbia boiler-burner units. The features are so practical, so easily explained, and so very much in demand. The Columbia boiler is priced low, has a five-year guarantee, no tubes to clog or leak, full ¼" copper bearing boiler plate. With a selling story like that, you'll never have to learn vaudeville tricks!

the original "tubeless" boiler



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Manufacturers' Activities

Quaker sold to Florence; to operate as a Division

FLORENCE STOVE CO., Gardner, Mass., has acquired the Quaker Mfg. Co., Chicago, which nationally distributed oil and gas heating equipment. It was pointed out that this acquisition will eventually result in an increase of nearly four million dollars in new sales.

The Quaker Mfg. Co. was organized in 1888. It was one of the earliest heating stove manufacturers to concentrate on pot-type heaters. A big factor in the success of the Quaker Co. was its president, A. T. Atwill, who assumed that post in 1933. Atwill is well-known throughout the appliance industry and is a past-president of the Oil Heat Institute. It is expected that Atwill will continue with Quaker.

According to present plans, Quaker will be operated as a division of the Florence Stove Co., with production of the Quaker line handled at Florence's Gardner, Mass. factory. Distribution of Quaker merchandise will be continued through the same channels.

The Quaker organization includes O. B. Nelson, sales manager, a staff of engineers and field sales organization that sells through approximately 50 distributors.

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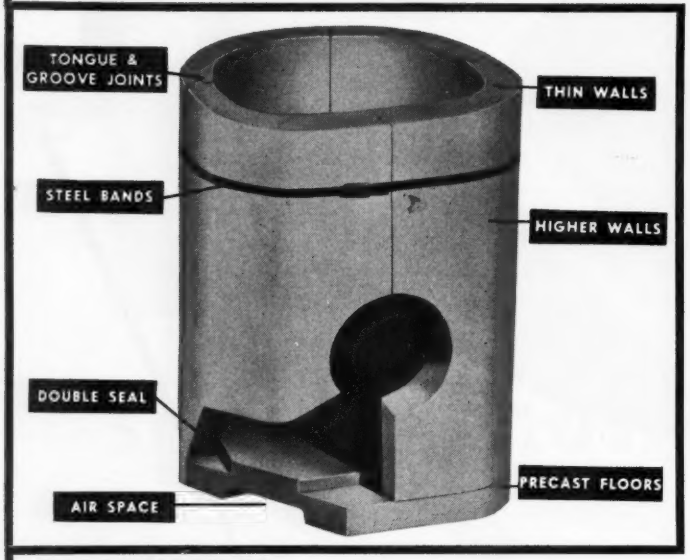
HAS 137 STANDARD DESIGNS & SIZES OF LITE • CAST INSULATING REFRACTORY COMBUSTION CHAMBERS FOR . . .

All BOILERS & FURNACES



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Long Life

THE MONOGRAM PACKAGE

This Newly Designed Packaged Unit has been developed after many months of careful study and tests. The Heavy Fibre Container has many advantages over other types of containers. It is Rigid and Tightly constructed, eliminating unnecessary breakage and sifting out of back fill. It is Water-proof and Light in Weight which makes for substantial saving in shipping costs.
Package includes everything necessary to make the average installation in a Boiler or Furnace and is easy to handle and takes up a minimum of storage space.
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U. S. PATENT 2075433

MONOGRAM PRODUCTS CO., INC.

731 NORTH 35TH STREET • PHILADELPHIA 4, PENNA.

Webster Electric Co. ups nine Officers in executive Shift

WEBSTER ELECTRIC CO., Racine, Wis., at its annual board of directors meeting, advanced nine of its officers. Elected as chairman of the board was S. Arthur Loeb, president of the company for 26 years. Succeeding Loeb as president is Arthur C. Kleckner, formerly vice-president and secretary.

Other officers of the board promoted were Preston G. Crewe to executive vice-president and treasurer and Frederic A. Fischel to vice-president and secretary.

At the same time these appointments were voted: David J. Munroe, vice-president in charge of manufacturing and engineering; Benton T. Wiechers, vice-president in charge of industrial sales division; D. Hale Darnold, vice-president and director of purchases and Joseph O. Mithus, assistant treasurer. Elliott M. Ray was reappointed as assistant secretary.

Conco holds service Schools for its dealer Organization

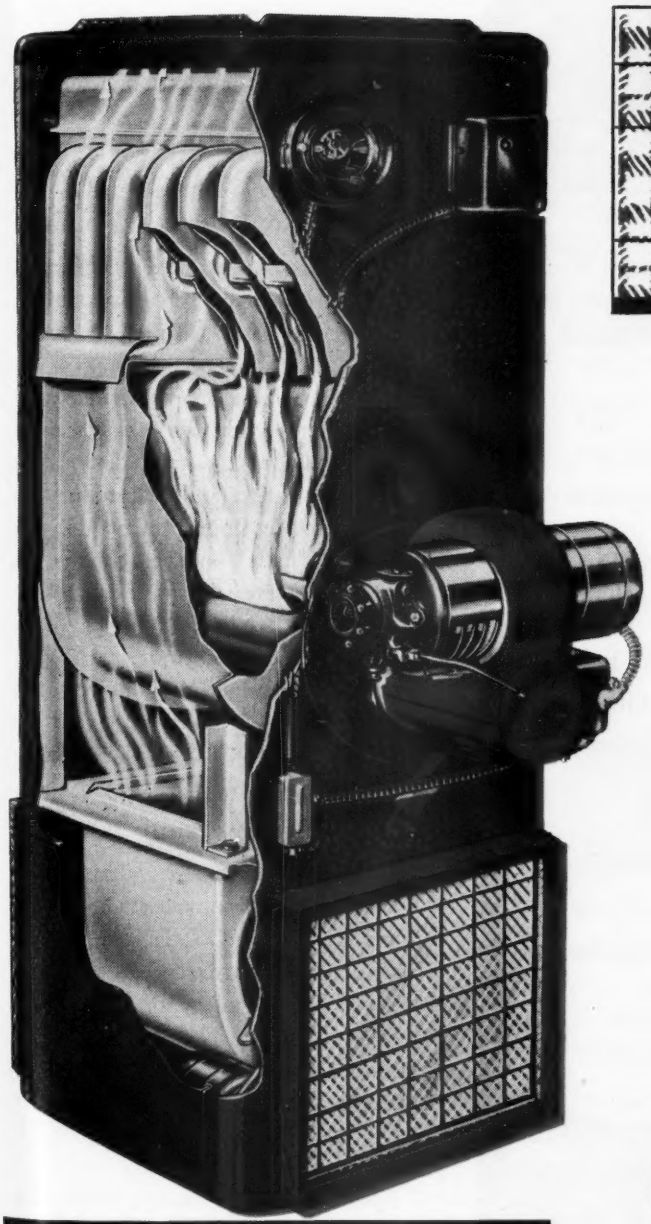
CONCO ENGINEERING WORKS, Mendota, Ill., is holding two-day courses at its specially furnished building at the Conco-Heat plant for installation and service men in its dealer organization.

Jim Wells, head of Conco's service department, runs the school which explains how to install, maintain and service Conco equipment and acquaints the men with new changes and developments in the Conco line. Currently, the school is conducted every Monday and Tuesday, but plans are to make it a year 'round, once-a-month school.

Classes are limited to 24 service men so that each man can have individual instruction and group discussions can be held. In the classes, the students are each given a set of tools and required

SELL GILBARCO

THRIFTY HEAT



FEATURE THIS NEW LOW-COST
WARM AIR CONDITIONER
FOR BIGGER PROFITS IN '52

Designed for large volume sales in the vast small home market . . . 75,000 B.t.u. capacity.

A completely packaged unit for easy handling and fast, inexpensive installation.

Priced l-o-w. But bearing a well-known name which has always been recognized as warranting high quality.

Assured Economy—the GVU-75 has the exclusive and patented Economy Clutch . . . still the most valuable single sales feature in the oil-heating equipment field.

LOW IN COST . . . TOPS IN QUALITY . . . THEREFORE EASIER TO SELL

Gilbarco

THE OIL BURNER WITH THE ECONOMY CLUTCH

GILBERT & BARKER MANUFACTURING COMPANY West Springfield, Mass., Toronto, Canada

fueloil & oilheat

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to tear down and rebuild furnaces and burners, and perform all common adjustments, replacements and service details. The course ends with a written examination of 40 questions covering the two-day session. To date over 100 men have attended the school.

Eichman, Sander and Price get new Posts with Penn

ROBERT D. EICHMAN, George Sander and E. A. Price have been appointed to new positions with Penn Controls, Inc., Goshen, Ind.

Eichman has been appointed sales engineer in the company's New York district office. He formerly was engaged in sales and engineering work in connection with equipment installation and is well versed in the application of controls for numerous units.

George Sander, formerly sales engineer in the New York district, has been appointed district manager.

E. A. Price was named educational director. He was serving as manager of the New York district office. Price will be assigned to the main office in Goshen to handle all phases of sales education as well as the training of new sales personnel.

M-H appoints three men to industrial managers' Posts

THREE NEW branch office managers have been named for the Industrial Div., Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Robert M. Woodside was appointed branch industrial manager at Cleveland, John O. Paull, in Los Angeles, and Lee Aplin in San Francisco.

All three new managers have been with Honeywell's Brown division for many years. Each is a graduate of the company's Instrumentation School at Philadelphia.

Field service Men attend Bell & Gossett's Meetings

BELL & GOSSETT CO., Morton Grove, Ill., held its annual five-day service conferences, June 9 through 13, at the B & G plant. The meetings were attended by 30 field service men and factory representatives who received instruction and practical demonstrations in both new and old products as well as product improvements.

Also included on the schedule of activities were various refresher courses, discussions of service problems and a complete tour of the Bell & Gossett manufacturing and research facilities.

Timken holds week-long School to train new retail Salesmen

NEARLY 100 selected salesmen of Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich., attended an intensive week-long sales training course at factory headquarters in Jackson. The school was established to provide in concentrated form the necessary sales training for new retail salesmen of Timken dealers throughout the country.

"More manpower means more sales power," R. M. Marberry, merchandising manager of the Timken division said, "and, to underline our belief that this is the answer to more sales in the heating industry, we told our dealer last March that the company would

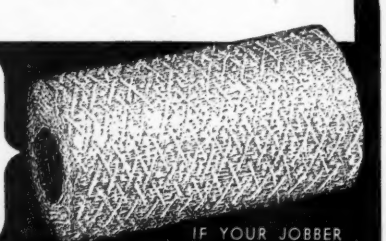
Fulflo Filters

Hot Weather Hint for Oil Burner Dealers

- To ensure maximum profit by cutting out costly service calls make sure that when cold weather comes every Burner you sell or service is equipped with a FULFLO Filter and that it contains a new Honeycomb Filter Tube.
- If you do this *now* you can relax in the Fall when everybody wants their FULFLO Filters and their Honeycomb Tubes at the same time, and we can't ship them out fast enough.
- The reason FULFLO Filters lead so outstandingly in sales is because they lead in performance. They assure you fewer costly service calls and give the home-owner better heat for less money.

Stop costly service calls with FULFLO Filters

The Honeycomb Filter Tubes used in FULFLO Filters give true depth filtration of precision-controlled density. Accept no substitutes.



IF YOUR JOBBER CAN'T SUPPLY YOU WRITE OR WIRE US

COMMERCIAL FILTERS CORPORATION
Two Main Street, Melrose, Massachusetts

underwrite all costs of a week's training in Jackson, as well as room and board, for all qualified new salesmen hired.

"We have been gratified at the response to this offer and the first school, in which 100 selected salesmen were enrolled, opened June 2. A second school will be held at a later date."

The school was conducted under the direction of Marberry, with William Chappell, Carl Watres and K. O. Ralphs, members of the factory sales staff, acting as instructors.

Courses of study included: company history, product application, installation and service relationship to sales, types of heating and control systems, sizing conversion burners, sizing units and heat loss calculations, sizing water heaters, sales use of technical knowledge, sales features, salesroom demonstrations, working with architects and builders and advertising.

Each graduate was presented with a certificate and a free TSA Retail Sales Kit.

Sid Harvey holds Schools for Dealers during June

EVERY TUESDAY AND WEDNESDAY, during the month of June, Sid Harvey, Inc., Valley Stream, N. Y., held its Trouble Shooting School for dealers and their personnel at its main plant.

Lectures were given by Sid Harvey experts, concentrating on practical solutions to everyday problems. Topics covered in the School were on G.E. oil furnaces, relays and fuel units.

Bennan named to top Post by Board, Jefferson Electric

AT THE ANNUAL MEETING of the board of directors, Jefferson Electric Co., Bellwood, Ill., held recently, James M. Bennan was elected chairman of the board and re-elected as president. As board chairman, he succeeds the late James C. Daley, one of the company's founders.

Bennan started with Jefferson in 1933. He has served as secretary, vice-president and director. He was first elected president in 1949.

Edward J. Bennan was elected executive vice-president and a member of the board. He has been with the company since 1939. Previous to this appointment, Bennan served as vice president in charge of manufacturing.

Both Bennans are the sons of the late John A. Bennan, another of Jefferson's founders.

Wisconsin Mueller Dealers tour Plant at special Meeting

A SPECIAL MUELLER CLIMATROL DEALER MEETING was held at the plant of L. J. Mueller Furnace Co., Milwaukee 15, Wis., recently for 130 Wisconsin State Mueller dealers. This was the second of two Wisconsin dealer meetings; the first was for Milwaukee County dealers only.

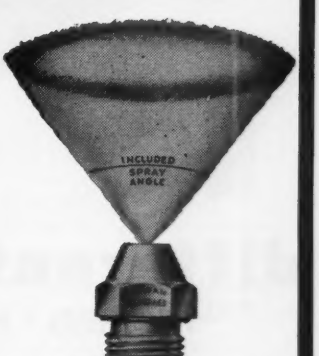
A tour through the Mueller plant was first on the schedule for the attending dealers, to see the various manufacturing and inspection processes each Mueller Climatrol unit goes through. The afternoon portion of the meeting was devoted to design,

(*Please turn to page* 110)

Nozzle TIPS

HOW YOU CAN GET BEST EFFICIENCY AT HIGHER FIRING RATES

The spray from a large nozzle is naturally coarser than the spray from a small nozzle. For that reason, it has been found that at firing rates above 5 GPH it pays to use two or more nozzles in a multiple adapter. That gives a shorter fire and better carbon dioxide. Spray angles of 45 and 60 degrees are most commonly used.



DELAVAN Type A (Hollow Cone) Nozzle

"IT PAYS TO USE DELAVAN NOZZLES"

DELAVAN NOZZLES are individually spray tested. Oil pressure, viscosity, and temperature are accurately controlled. DELAVAN testing is your guarantee of absolute accuracy in rate of flow, spray quality and spray angle.

Every DELAVAN nozzle packed in dust-tite carton. Spray angle and type clearly printed on top.

Write for condensed Catalog 347C

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different Circulators

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EACH DESIGNED FOR ITS RATED CAPACITY

LARGER MOTORS • HEAVIER CONSTRUCTION

COMPARE capacities and motor horse power as well as size when you choose Circulators and you'll choose Thrush. Here is a complete line of horizontal or vertical Water Circulators to fit every heating job. They offer more for your circulator dollar because they're built better . . . even the smallest sizes are rugged in construction and have larger motors with greater actual output than other makes of equal rating. That means less trouble on the job . . . fewer service calls and greater customer satisfaction. Patented coupling eliminates vibration. Lubrication is sealed in. Ask your wholesaler about them or write Dept. C-7.

H. A. THRUSH & COMPANY • PERU, INDIANA

¾" • 1" • 1¼" • 1½"
1/6 HORSEPOWER

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1/4 HORSEPOWER

THRUSH water circulators

COMMERCIAL & INDUSTRIAL oilburning

Comparing two Types of Burners

How Fueloil, Air, and Electricity are used in rotary cup and gun type Burners

by
K. W. Day*

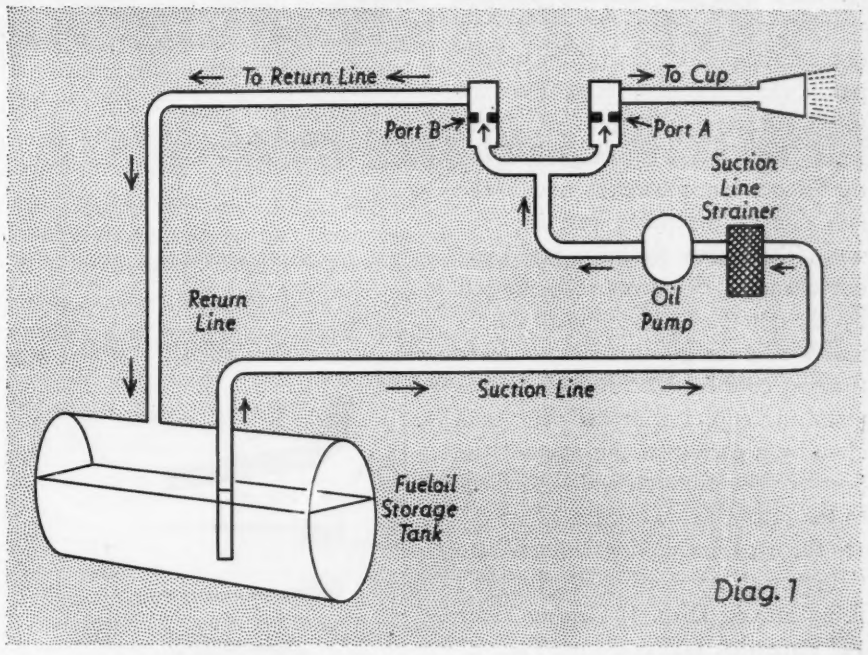
MYSTERY USUALLY RELATES to more complicated phenomena than the behavior of fueloil, air, and electricity. Therefore the limited understanding of rotary cup burners is not caused by any mysterious angle. But an understanding of "what makes things tick" can do away with the mystery sometimes attached to rotary cup burners.

For the benefit of men familiar with domestic pressure burners but not with rotary cup burners, here is a series of comparisons and contrasts regarding the utilization of fueloil, air, and electricity in these two types of burners.

The rotary cup burner handles larger quantities of oil than the domestic pressure burner, and can utilize the poorer grades of heavy fueloil without giving trouble related to clogging. However, it is like the domestic burner in that the fueloil must reach the flame with a smooth, dependable stream for the oil to burn with a continuous, smooth flame.

A suitable residual fueloil for the rotary cup burner is the grade that does not require oil preheating, because of its ease in handling. Low-priced compared to the fueloils used by domestic burners, this oil is called No. 4 or light No. 5 fueloil. It is regularly of viscosity light enough that it can be drawn readily from an underground tank by a gear type pump, which usually is an integral part of the rotary cup burner.

In the use of the burner motor to drive the oil pump as well as the other rotating parts, there is a functional similarity between a pump-type rotary burner and a domestic pressure burner, and the function of the pump is the same even where it is not an integral part of a rotary cup burner; a separate pump set, where used, simply delivers the fueloil to the point where it is disintegrated or atomized.



Diag. 1. *"Splitter arrangement" used to adjust and maintain gph rates of various rotary cup burners. Fueloil comes from the pump at a constant gph rate and must go through restriction ports A and B. Adjusting the area of either port changes the gph firing rate. In some burners, shifting a gph adjustment device simultaneously opens one valve wider while closing the other by a corresponding amount.*

The rotary cup burner uses larger oil lines than are used by a domestic pressure burner. These are necessary because the oil flow is greater on larger installations, and the fueloil used is considerably more viscous than domestic fueloil, in effect decreasing the willingness of the oil to flow through the lines. Larger lines compensate for additional resistance to flow.

Copper tubing is not recommended for lines handling residual fueloils, since these oils may contain sufficient sulfur to attack copper. Even the smaller rotary cup burners need suction lines of at least 1" pipe, in contrast to the familiar small copper tubing used on domestic installations for No. 2 oil.

A two-pipe oil flow system having a return line is standard for rotary cup burner installations. Handling oil at a much higher gph rate than the maximum gph firing rate of the burner, the pump of a rotary cup burner is oversize to assure a dependable flow of oil to the flame and permit dependable adjustment of the fire size. In contrast, the domestic pressure burner usually obtains oil from an inside tank (thus needs no return line), has a fixed fire size, and uses fueloil of low viscosity and relatively non-clogging.

Many rotary cup installations shift their firing rates automatically. More than one size oil flame is desirable for large burners, even if a small flame is used only for smooth starting when the burner starts and first ignites.

For practical purposes the oversize pump of a rotary cup burner, which in certain models pumps fueloil at twice the maximum gph rate of the burners, can be considered as a fueloil meter which emits oil at a constant gph rate under all conditions.

The oil coming from the pump at a constant rate can be divided, through the use of two similar ports or valves, into two streams; the first of these can

*Rotary Cup Burner Division, U. S. Machine Corporation, Lebanon, Ind.

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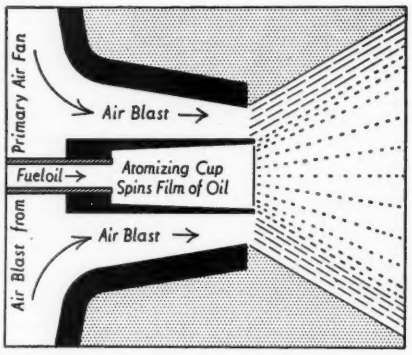
flow to the atomizing cup of the burner, and the second can flow to the return line, thus return to the oil storage tank. The gph pumping rate of a simple gear-type pump of course can not be adjusted or changed with the pump shaft running at a constant speed, but use of this "splitter arrangement" (see Diag. 1) permits changing the firing rate or fire size even while the gph rate of the pump remains constant. To increase the firing rate without changing the pressure developed by the pump, a service man simply makes adjustments that open farther the port or valve providing oil for the atomizing cup, and at the same time close by a corresponding amount the port or valve through which oil flows to the return line. Opening "Port A" (to the cup) and closing "Port B" (to the return line) increases the burner's firing rate in Diag. 1. Closing "Port A" somewhat and opening "Port B" by a corresponding amount decreases the burner's firing rate, and does this without raising or lowering the pressure the pump develops. This idea of the "splitter arrangement" is used in various makes of rotary cup burners, and in several burners special valves are used to make the two opposite oil port or oil valve adjustments simultaneously when the service man changes a single gph adjustment device. Shifting the gph adjustment device simultaneously opens one valve farther while closing the other by a corresponding amount.

Compensates for viscosity Changes

The same "splitter arrangement," shown in Diag. 1, compensates for changes in the viscosity of the oil, which occur when viscous fueloil becomes cooler or hotter or when fresh loads of oil are delivered. The oil that comes from the pump at a constant gph rate must go through "Port A" and "Port B" openings of certain, fixed sizes when the fire size is adjusted to a certain gph rate. Consequently the viscosity compensation is accomplished by an increase in oil pressure between the pump and the two regulating ports or valves as the fueloil becomes thicker.

All this refinement of the oil flow and metering systems of rotary cup burners is warranted because of the inherent ability of this type burner to use widely different types of fueloils and to operate automatically while giving flames of different sizes. In contrast, the domestic pressure burner gives a flame of a fixed size and uses only fueloil that is highly refined and clog-free, compared to the residual, heavy fueloils.

A burner which has a motor-driven atomizing cup operates with the same atomizing cup speed, thus gives equally good atomization, regardless of the rate at which oil is fed to the atomizing cup. This feature gives such a burner



Diag. 2. *Fueloil fed to this atomizing cup, which is motor-driven at relatively high speed, is flattened against the cup's inside surface by centrifugal force. Finally it leaves the open end of the cup and is atomized or disintegrated by the blast of primary air.*

the advantage of easy adjustment of the fire size or gph rate with the burner in operation. Whether a burner with a motor-driven atomizing cup is producing its minimum-size or maximum-size flame, the oil is whirled against the inside surface of the cup, flattened against the inside surface by centrifugal force, and finally atomized or disintegrated as it leaves the open end of the cup and encounters the blast of air produced by the primary-air blower of the burner. Diag. 2 shows this.

The oil pressure developed by the pump is of no importance to atomization, when this method of atomizing the oil is used, since the only function of the oil pressure is to deliver oil in a smooth, steady stream to the atomizing cup.

This method of atomization differs greatly from the method used in a domestic pressure burner, for in the pressure burner the atomization of the oil depends on maintaining the nozzle pressure high enough to provide good atomization.

Fuel Feed to atomizing Cups

Atomizing the oil in a domestic pressure burner depends on passing the oil properly through an atomizing nozzle which has tiny ports and openings; meticulous straining and filtering of the oil is necessary to prevent nozzle-clogging troubles. In contrast, the rotary cup burner needs no fine straining or filtering of the oil, for its freedom from clogging when burning residual fueloil comes of having large oil-flow passages throughout the oil-handling system of the burner. The oil metering system and the parts used to feed the oil to the cup, for example. have large, clog-free openings.

Several of the methods used to feed fueloil to atomizing cups are shown in Diag. 3. A stationary oil feed tube may extend through a hollow, revolving shaft to the atomizing cup. A hollow revolving shaft may, itself, serve as a pipe to conduct the oil to the atomizing cup. A solid shaft, used to drive the cup and the burner's primary-air blower, may have on it an atomizing cup of the "open back" type, with a perforated partition or spoke or spider arrangement within the cup, as the diagram shows.

Oil preheating equipment, often involved and complicated, is a necessary part of the rotary cup burner installation that uses No. 6 oil, Bunker C oil, or other oil that can not be handled and burned properly without preheating. Properly heated, the heavy oil thins and becomes less viscous, thus becomes the equivalent of lighter oil.

The rotary cup burner presents more of a problem than the domestic pressure burner when it comes to the ignition of the oil. The heavier oil used by the rotary cup burner not only is harder to light, but also is difficult to keep burning, particularly in a cold combustion chamber and with a variable-flame burner firing at its lowest gph rate. Part of the difficulty arises from the higher flash point of the heavier oil.

(*Continues on page* 102)

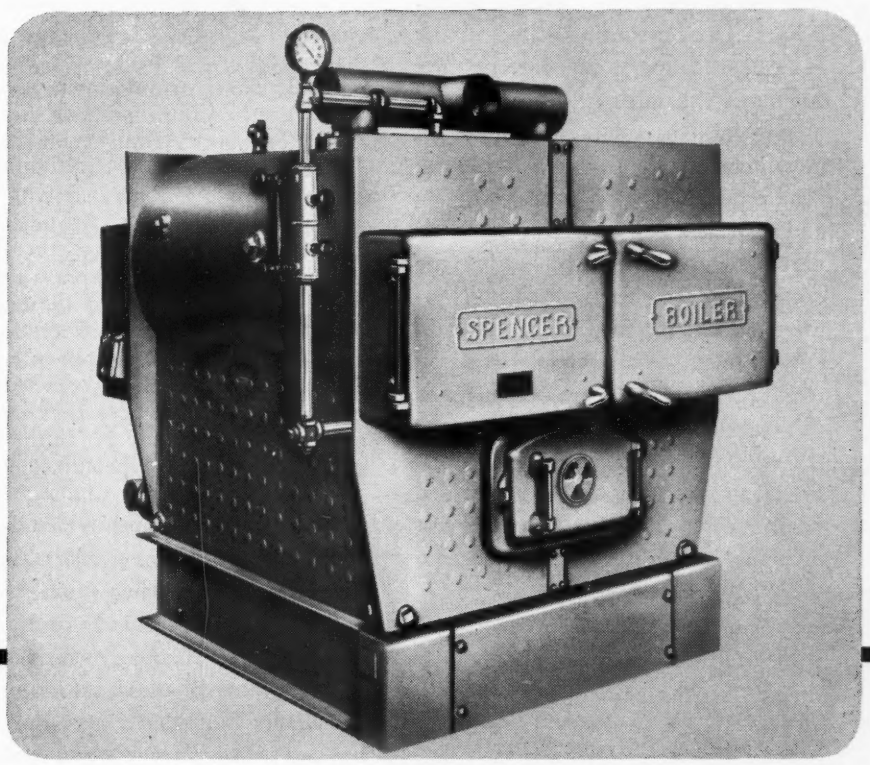
NOW! A real advance in Boiler Design!

SPENCER'S

NEW DIVIDED LOW-WATERLINE BOILER!

We flattened it out to beat the headroom problem! Overall height is approximately 25% less than conventional firebox boilers.

We divided it in half to help you get it through narrow basement openings. The two watertight sections can be moved in separately, yet require no welding for installation and assembly.



The new Spencer Divided Low-Waterline Boiler is available in a range of sizes from 3,500 to 42,500 square feet, steam. Working pressures are 15 pounds steam and 30 pounds water. Also available for working water pressures up to 100 pounds.

Fast-steaming through the use of staggered rows of fire tubes. **Self-cleaning**—since water sides of heating surfaces are kept free of sediment. **Instantaneous or tank-type** service water-heating coils in a wide range of capacities. **Quickly convertible** from mechanical to hand-firing, whenever desired. **High firebox** for quiet and complete burning of fuels.

Designed, constructed and stamped in accordance with requirements of the ASME Boiler Construction Code.

Rated in accordance with SBI Code.

Inspected and approved by licensed National Board Insurance Inspector.

Only one of Spencer's complete line of boilers

THERE'S A SPENCER FOR EVERY BUILDING...FOR EVERY FUEL

SPENCER HEATER
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Fueloil & oilheat

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Each droplet or globule of heavy oil must be heated to a temperature above its flash point, before it will gasify and ignite. To accomplish ignition of the heavy oil requires a greater quantity of heat than comes of brief contact with an electric spark, although of course spark ignition is used for domestic pressure burners which use light fueloil. The rotary cup burner uses a gas pilot for the actual ignition of the fueloil. The success of the gas pilot method of ignition is due to the relatively longer time each globule of oil is exposed to the gas flame.

Air and Electricity

The foregoing has dealt with rotary cup burners and domestic pressure burners in terms of the fueloils they use and the methods they use for handling, atomizing, and igniting the oils. In addition to fueloil, there are two other components essential for the operation of these two types of burners, namely, air and electricity.

Combustion of fueloil involves the air needed to support the burning action. An oil flame cannot exist without air, any more than it can exist without oil. Both a rotary cup burner and a domestic pressure burner must have air to produce a flame.

In the case of the rotary cup burner, only part of the air for combustion is supplied by the blower which is part of the burner. The blower air, called the primary air, is provided by a blower wheel that runs at relatively high speed, and assists atomization by blasting into the thin film of oil leaving the atomizing cup. Within a few inches of the atomizing cup is a mixture of atomized oil, primary air, and secondary air, and this is the point at which the gas pilot is directed, as being most conducive for ignition.

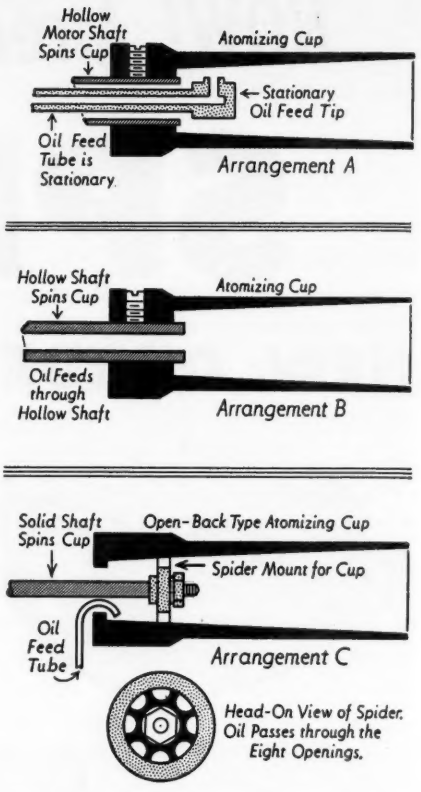
The lighting of the flame at the point where air and atomized oil are first engaged is another point of similarity between the rotary cup burner and the domestic pressure burner. The difference is chiefly that in the case of the rotary cup burner a part of the combustion air is needed and used to blast the oil into fine enough particles that they will mix with air while in suspension and then ignite and burn with a dependable flame. This relates to the use of low grade fueloil which is difficult to atomize.

The secondary air for the rotary cup burner, which is the balance of the air required to assure complete burning of the oil, is drawn into the combustion chamber directly from outside the boiler, and does not flow through the burner. This secondary air is drawn into the combustion chamber by draft provided by a chimney or an induced draft fan. A few, rare installations have forced draft blowers to provide the secondary air.

A plate, called the front mounting plate, is fastened to the front of a boiler to support a rotary cup burner. Usually the secondary air enters the boiler through an opening or damper which is in the front mounting plate and just below the burner. Air entering the combustion chamber at this point starts mixing into the combustion space almost immediately and helps make the combustion of the oil flame complete and smokeless. On certain installations part of the secondary air flows into the combustion chamber through ports located above the burners, but usually only in small amounts compared to the total secondary air, since in this case this over-fire air is only to supplement the regular secondary air. Such over-fire supplementary air is provided where a deficiency of secondary air just over the flame causes flame pulsation or gasping.

Adjusting blower Air

The domestic pressure burner uses but one supply of air, and the air is blown into the combustion chamber by a blower built into the burner. However, both the domestic pressure burner and the rotary cup burner have means for adjustment of the blower air. A pressure burner has a damper or adjustable opening in the blower intake. The intake of primary air to the blower of a rotary cup burner also is adjustable by means of a shutter or damper arrangement. The rotary cup burner usually is provided with a linkage which is connected to an oil valve of the throttling type, and to two dampers used to control the primary air and the secondary air. Thus when the fire size is changed there is a corresponding change of all three, which maintains the same oil-air ratio for any size flame. For automatic operation the linkage to the oil valve and both air dampers is positioned by an electric motor, which in turn is guided by electric controls.



Diag. 3. *Three arrangements used to feed fueloil to the atomizing cups of rotary burners. Arrangement A includes a stationary oil feed tube located within a hollow shaft that revolves to drive the cup. Arrangement B feeds the fueloil through the shaft that drives the cup and employs a shaft gland at the input end of the hollow shaft, whereas such a gland is not used with the other two arrangements. Arrangement C uses an oil feed tube to spill the oil into the open-back end of the cup; notice the lip inside the left-hand end of the cup.*

Since more and more of the things we use are becoming automatic, from baby-bottle warmers to the gear shifts of automobiles, fire tending has had to become automatic also. As the use of automatic firing features increased, electricity has played an ever increasing important part in oilburner operation. At first electricity merely powered the burner motor used to drive

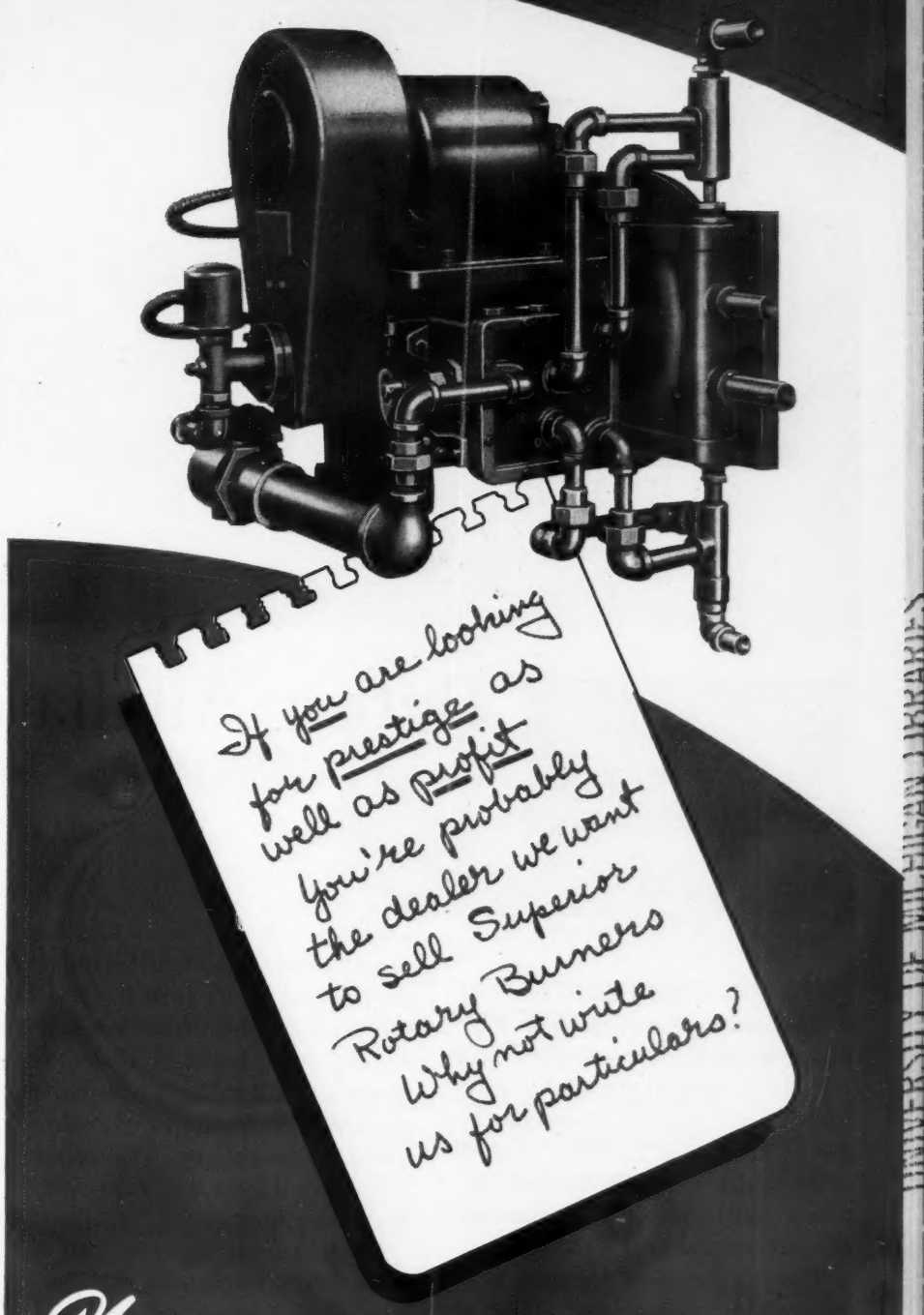
the oil pump and air blower, and the atomizing cup of the rotary cup burner. Now the controls also depend on electricity.

Development of Controls

With the development of burners that could give a dependable oil flame came the idea of automatic starting and stopping, since the ancient chore of "keeping the fire" always had been of dubious popularity. After the development of automatic ignition for oilburners, automatic oilburner operation boiled down to the problem of starting and stopping the burner at the desired time. For one thing, when the air being heated became cool the burner could start, and as the air became warm enough in a house or building the burner could stop. So along with the spirit of progress came the automatic switch that responds to changes in temperature, which we call the room thermostat. Then came other switch devices responsive to changes in steam pressure, furnace temperature, boiler temperature, etc., and oilburners became fully automatic; soon after, they were to become essential to modern living. Control panels were developed to provide constant ignition or intermittent ignition, and to shut down the burner in case of ignition failure or flame failure. Later came the instant-acting electronic controls.

The idea of using an electronic photocell to monitor an oil flame is used today on both rotary cup and domestic pressure burners; in the both cases, the principle is to have the photocell located to sight the oil flame. Photocell monitoring of the oil flame has been combined on modern versions of the electronic controls with a start-up sequence or programming control that, because of the cost, is used normally only on industrial installations.

The modern electronic control for rotary cup burners differs from the representative domestic oilburner control in that it tests for proper operation of the ignition system. Fueloil cannot flow to the atomizing cup until this electronic control has ascertained that the flame of the gas pilot is ready to light the oil. This refinement has gained widespread acceptance because of the increased safety it provides.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- V-Belt Drive for the high cup speed essential to efficient atomization.
- Four-Hole Hinge circulates oil through oil heater so that hot oil is on the *pressure* side of the pump, allowing you to burn oil at higher temperatures.
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- Dual Pumps and Reservoir combined with Constant Oil Rate Control provide controlled firing regardless of viscosity variation.
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- Fully automatic in sizes to 500 bhp with dual ignition, and hi-low or fully modulating control.

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COMMERCIAL & INDUSTRIAL oilburning

Better Alfalfa drying

Changing to combination Burners increases Output, cuts Costs

by
G. A. Martin*

IN THE RICH San Joaquin valley of California, near the town of Firebaugh, is located what is unquestionably the world's largest alfalfa dehydrating plant, owned and operated by Mr. V. C. Britton. To assure a supply of green alfalfa, Mr. Britton also cultivates and harvests an alfalfa ranch of nearly six thousand acres.

Through the use of the most modern mechanical equipment installed at this ranch, it is possible to harvest, chop, dehydrate, grind and sack 125 tons of alfalfa meal per day. What is of vital importance to the quality of the finished product is the fact that the green alfalfa is never permitted to touch the ground.

Top of the page: *Three of the eight power-driven Harvesters that Britton uses. Each has a 4-ton hopper and hydraulic lift. Two of the hoppers fill the dump truck shown, which then transports the chopped alfalfa from the field to one of five dehydrators.*

The Britton ranch operates eight power-driven harvesters, each equipped with a chopper and a four ton hopper with hydraulic lift. Two of these hoppers fill a dump truck which transports the chopped alfalfa from the field to one of the five dehydrators where it is dumped on an automatic feeder. The feeder is automatically controlled by the outlet temperature as predetermined by the operator. The temperature is varied from 260° F. to 310° F. as conditions require.

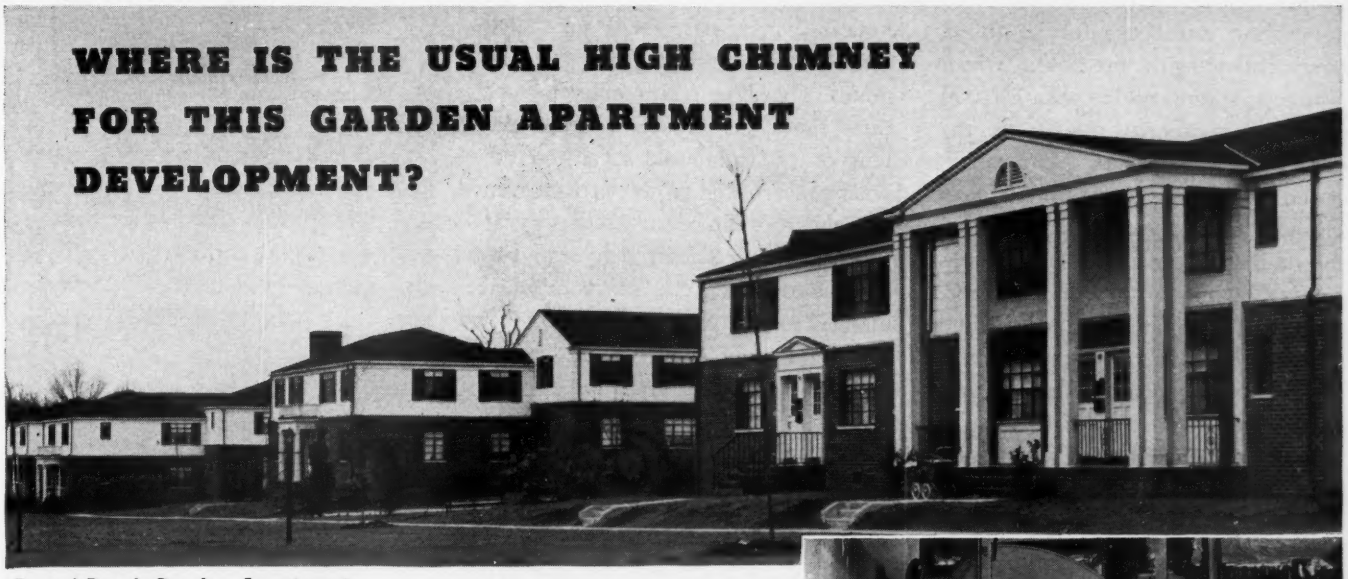
In one minute from the time the green alfalfa reaches the dehydrator, it is in the hammer mill where it is converted into meal. From the hammer mill it goes by conveyor into a set of reels or separators which separate the various sizes of grind, allowing the fine grind to pass through and the larger grind and stems to be re-run through the mills. This process guarantees an even grind for the entire product.

Following this process the meal is reblended and goes to the sacker, where it is automatically weighed, sacked and sewn in one hundred lb. sacks. The sacks are then carried by conveyor to a station where they are placed on pallets. From this point they are transferred by finger lifts and stacked in a

One hundred lb. *bags of alfalfa stacked in the pre-cooling warehouse. After 24 to 48 hours they are stored in a refrigerated warehouse before shipment.*

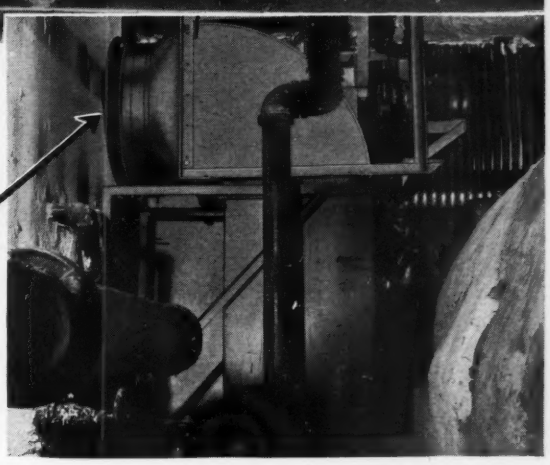
*Sales promotion manager, Ray Oil Burner Co., San Francisco 12, Calif.

WHERE IS THE USUAL HIGH CHIMNEY FOR THIS GARDEN APARTMENT DEVELOPMENT?



Bound Brook Garden Apartments
Bound Brook, New Jersey

It's down in the basement



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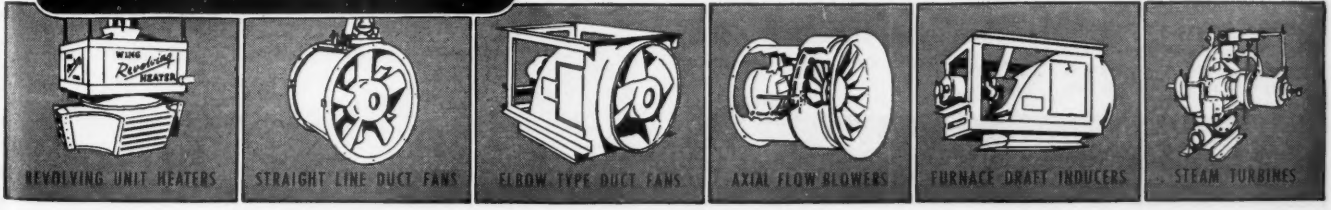
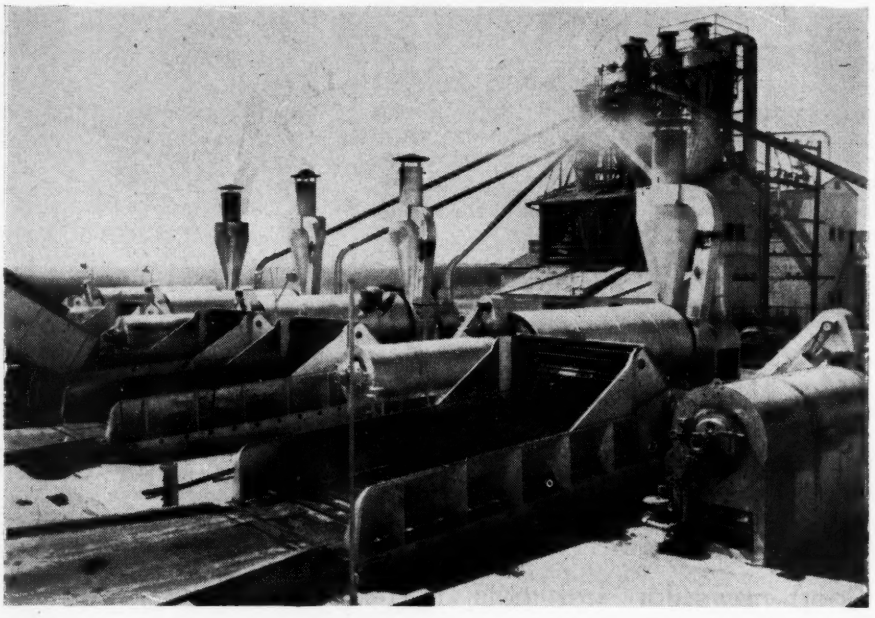


pre-cooling warehouse for 24 to 48 hours. Following the precooling, which is an evaporation system with 150,000 cu. ft. of air capacity per minute, the sacks are transferred to a 28° refrigerated warehouse and stored until shipped. Due to this cooling process the vitamin A content loss is negligible.

High quality alfalfa meal is especially rich in vitamins A and G, and also vitamin K which counteracts many diseases common to poultry. Fresh, green alfalfa, cut at the right stage of growth, contains from 45 to 50 milligrams or more (on the dry meal basis) of carotene per 100 grams. Freshly made, sun-cured alfalfa meal of good quality contains an average of only about 10 milligrams per 100 grams. But if the green alfalfa is cut and dehydrated immediately the meal will contain 25 to 35 milligrams per 100 grams of meal or retain an average of three times the valuable vitamin content of the sun-cured alfalfa. And, what concerns the grower is that seven or eight crops can be harvested per year when cut and quickly dehydrated as contrasted with five or six crops when allowed to cure in the sun.

COMMERCIAL & INDUSTRIAL oilburning

One of the major problems involved in the dehydrating process is the proper design of an efficient combustion chamber. Until a few months ago the Britton ranch was using a conventional furnace and combustion chamber with atmospheric gas burners of the jet type.



World's *largest alfalfa dehydrating plant, near Firebaugh in the San Joaquin Valley, California. V. C. Britton, its owner and operator, recently installed in the five ovens and driers shown 50 Ray combination gas-oil-burners. The conversion was handled by H. A. Sparks, Ray Oil Burner Co. distributor, who designed a special combustion chamber for the ovens.*

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FOR OILS UP TO No. 5
Valves C5 and C10 are available in ⅜" and ½" sizes.

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Valve A is available in 1¼", 1½" and 2" sizes for 5 or 10-foot head pressures.

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New **THERMALINK**
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OIL PRE-HEATING UNITS

★ Integral adjustable thermostat eliminates wiring problems.
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★ Available with pipe-thread or flange header.
★ Wattages from 1000 through 7500.
★ Conservative watt-densities prolong life, minimize carbonization.

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ELECTRO-THERM INC. • SILVER SPRING, MD.

Sacking alfalfa meal *and weighing it automatically. One 100 lb. sack is filled every five seconds, carried by conveyor to a location where sacks are placed on pallets and then stacked in a pre-cooling warehouse.*

H. A. Sparks, Ray Oil Burner Co. distributor, and a heating engineer of broad experience, observed the operation of this dehydrating plant and after a number of tests and considerable study presented the owner with a proposal wherein he would be able to increase the output and substantially reduce the cost of production. His proposal was sufficiently convincing to secure a contract for a new installation which consists of an entirely new oven and combustion chamber of Mr. Sparks' own design and the replacement of the atmospheric gas burners by five Ray premix gas burners.

After a trial test the burners were converted to combination gas and oil-burners, AGC, Model 50, to provide stand-by facilities in event of gas supply failure. Furthermore, the gas supply was found to be inadequate to fire all five burners simultaneously at maximum capacity. Each burner has an operating capacity of 100 gph of No. 5 fueloil or 15,000 cu. ft. of gas per hour, with heating capacity input of 15,000,000 Btu per hr. while burning either fuel.

A test run, following the installation showed an increased in out put of 33-1/3% and reduced the production cost $1.00 per ton. With a production capacity of 125 tons per day, it is rather obvious that the investment in this new equipment will be quickly amortized.

North American Handbook covers industrial Heating

COMBUSTION HANDBOOK, prepared and published by The North American Mfg. Co., is a basic reference on the art and science of industrial heating with liquid and gaseous fuels. The Handbook contains no advertising; has been compiled to provide a basic explanation of the theory of combustion; outlines for combustion, heat transfer and fluid flow calculations; charts and data to simplify and speed these calculations and a discussion of combustion equipment, its selection and operation.

Divided into eight chapters, the first, "The Elements of Combustion," is intentionally elementary, designed for the newcomer to the field of combustion engineering. In addition to the treatment of industrial heating, the book contains also considerable information applicable to commercial heating and solid fuels.

Succeeding chapters are on the subjects of Fuels, Combustion Analysis,

King-Size Profit for You...

...SHOW BIG FUEL OIL USERS (6,000 GALS. OR MORE PER YEAR) HOW TO CUT COSTS AS MUCH AS 20% TO 30%...

Why limit yourself to the crowded, highly competitive light-oil burner markets! Cash in on today's demand by big fuel users for low-cost, high-heat value heavy fuel oils up to and including No. 5.

Cleaver-Brooks HEV-E-OIL BURNER

FOR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL INSTALLATIONS

THE KEY TO PROFIT—

the Cleaver-Brooks HEV-E-OIL Burner, efficiently using the heavier, less expensive commercial No. 5 oils, instead of light oils costing 20% to 30% more. Hundreds of satisfied owners report big savings — costs cut as much as 20% to 30%. It's a selling "natural" in these days of high and rising costs.

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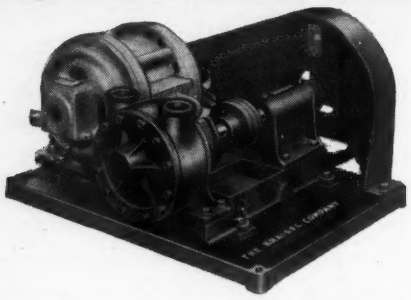

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pull cold oil!

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Advantages of our design are: ease of cleaning; and interchangeability of separator baskets—from coarse straining to fine filtration. Cleaning of removable separator baskets restores original efficiency—thus eliminating normally expensive replacement costs.

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Heat Transfer, Flow of Fluids, Burner Equipment, Combustion Control and Combustion Systems. Each chapter is in turn sub-divided for detailed treatment of auxiliary subjects. Throughout there are numerous illustrations, drawings and charts—in all 178—that supplement and explain the text. The concluding pages contain an appendix, with more than 3,000 entries, a comprehensive list of abbreviations and symbols and a glossary of terms used in the combustion industry.

The North American Combustion Handbook combines a text and reference work in its 322 pages, is bound in hard covers. Copies may be purchased from The North American Mfg. Co., 4455 East 71st St., Cleveland 5, Ohio. Price: $2.00.

Cleaver-Brooks names Mason Representative in Ohio

CLEAVER-BROOKS CO., Milwaukee, Wis., announced the appointment of Mason Equipment Co., Toledo, O., as a manufacturers' representative for the sale of its boiler equipment. Mason's territory will include nine counties in northwestern Ohio.

Brown Instruments Seminar slated for engineering Profs

THE THIRD ANNUAL SEMINAR in industrial instrumentation will be held for professors of engineering in Philadelphia, Pa., August 18 to 22, it was announced by the Industrial Div., Minneapolis-Honeywell Regulator Co., Philadelphia, Pa.

According to M. J. Ladden, training supervisor for the company's Brown Instruments Div., the five-day program is designed to familiarize the faculty of engineering schools with recent advancements in industrial processes and the attendant development of automatic instrumentation. Ladden said that this phase of engineering is covered only on a broad basis in the conventional curriculum. The program will also include discussions of mutual problems of engineering colleges and the instrument industry.

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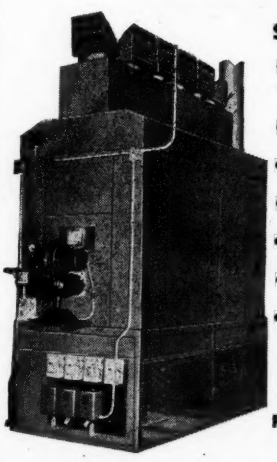

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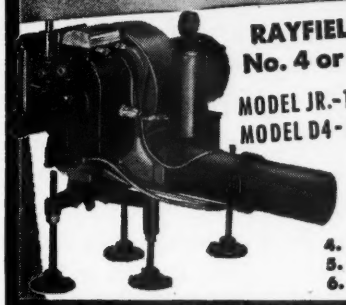

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2 MODELS-1.00 to 3.00 GALS./HR. CAPACITY

1. Amazing Economy 12 to 15% CO_2
2. Clean boilers with perfected combustion
3. Burns Catalytic oils easily
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Industrial Piping is Guide to Principles and Methods

INDUSTRIAL PIPING, by Charles T. Littleton, is a comprehensive manual of data and procedures for practical use by designers, estimators, foremen and engineers. The book constitutes a guide to piping principles and methods, covering steam, water, oil, gas and instrument piping. It tells which pipe materials, fittings and valves should be used for each specific service and explains methods of installing them.

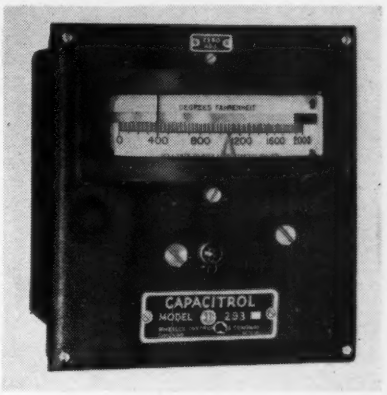
The book includes compilations of useful data on different materials and types of piping required in the chemical, process and petroleum industries and power plants, incorporating the most frequently needed standards and information so that it becomes a quick-reference manual. Conveniently arranged are tables, formulas, line drawings and charts, with such methods as sizing pipes and determining pressure drop plainly described.

Other chapters discuss solving oil-flow problems, water or steam calculations, a review of the subject of gas laws, with a special chapter by R. A. Dickson on estimating piping costs. Insulation recommended for pipe at different temperatures, tables of fittings grouped for the service where generally used, a list of valve equivalents for the most commonly used valves in pressure classes up to 600 lbs. and millimeter equivalents for detail dimensions of fittings make up some of the other useful data included.

Industrial Piping, published by McGraw-Hill Book Co., Inc., 330 West 42nd St., New York 36, N. Y. Board covers, 394 pages, 96 illustrations, price: $8.00.

Model 293 Capacitrol pyrometer Controller

WHEELCO'S model 293 Capacitrol is a compact, direct-reading, indicating pyrometer controller, incorporating a built-in unit to provide straight-line control. Designed for controlling processing equipment, the instrument operates with the same "Electronic Link" used in other Wheelco Capacitrol controllers, but adds a new Lineotrol feature to automatically reduce to a minimum the "on" and "off" variation of the control instrument.



Like its predecessor, model 292, the new model uses the same measuring system with Alnico V magnet and control assembly, but has the further advantage of being able to compensate for transfer lags. Size of the instrument is 7⅝" wide, 8⅛" high and 7-25/32" deep.

Made by: Wheelco Instruments Co., 847 West Harrison St., Chicago 7, Ill.

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ALSTROM CAST IRON TANKLESS
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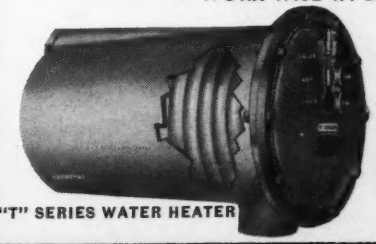
• PRECISION ENGINEERED • RUGGEDLY CONSTRUCTED
• WORK-WISE IN DESIGN



"T" SERIES WATER HEATER

1. reasonably priced for volume sales
2. easiest and quickest to install
3. dependable performance eliminates service costs

fully guaranteed

THE ALSTROM CORPORATION
790 EAST 176 STREET • NEW YORK 60, N.Y. • CY 9-7310

Manufacturers' Activities

(*Begins on page 92*)

service and installation of Mueller equipment. A buffet supper was served in Mueller's building #43, the site of the meeting.

In the evening, the program was slanted towards sales and sales promotion, and included a two act skit on the need for merchandising at the dealer level.

H. P. Mueller, president of the company, welcomed the dealers in the afternoon and outlined some of the current problems which may affect this industry during the remainder of the year.

Frank J. Nunlist, general sales manager, served as host of the meeting. He discussed in detail some of the inherent problems that dealers are faced with in the operation of their business. Other speakers included Otto J. Ross, director of research; John Reock, manager of advertising and sales promotion; H. P. Mueller, Jr., assistant sales manager; Robert Hoehne, application engineer; R. W. Weekes, assistant to general sales manager and Fred Wegehaupt, application engineer.

The TUTHILL
Model 30A5G
FUELSTAT
...features SIMPLIFIED SERVICING
VALVE readily accessible for service
On the new Tuthill Model 30A5G FUELSTAT, the ONE-position vertical pressure regulating valve is easily serviced—right on the burner. All parts can be quickly removed without special tools.
From one end to the other, this new FUELSTAT is designed for simplified servicing as well as dependable performance.
TUTHILL
25th
PUMPS FOR THE PURPOSE
Anniversary
Write for full details today.
TUTHILL PUMP COMPANY
939 East 95th Street, Chicago 19, Illinois

White-Rodgers will open new Detroit branch in Fall

WHITE-RODGERS ELECTRIC CO., St. Louis 6, Mo., announces the opening in Detroit of a new enlarged branch at 16590 Wyoming, where a complete supply of controls will be warehoused for servicing Detroit and the surrounding area.

Formal opening is expected in early September, when laboratory and other plans are completed. Charles O'Brien is manager of the new branch, assisted by Don Robinson.

The branch will also operate as an exchange agency, having replacement facilities. Ample parking area will be provided.

Gulf adds Tankage along Plantation pipe line Route

THE GULF OIL CORP., Pittsburgh, Pa., has announced it is building 915,840 barrels (38,465,280 gallons) of additional tankage for the storage of gasoline, kerosene, and distillate oils at strategic points along the Plantation Pipe Line which runs from Baton Rouge, Louisiana, to Greensboro, North Carolina. Expected to be completed by November 1 of this year, this project is part of Gulf's projected 200 million dollars or more expansion program for 1952.

The largest amount of new tankage will be installed at Greensboro. Five tanks will be erected there, one of which will be a 80,580 bbl. tank for the storage of distillate oil.

M-H redesigns Trademarks to add to Visibility

A MODERNIZATION of its product identification and advertising symbols has been adopted by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

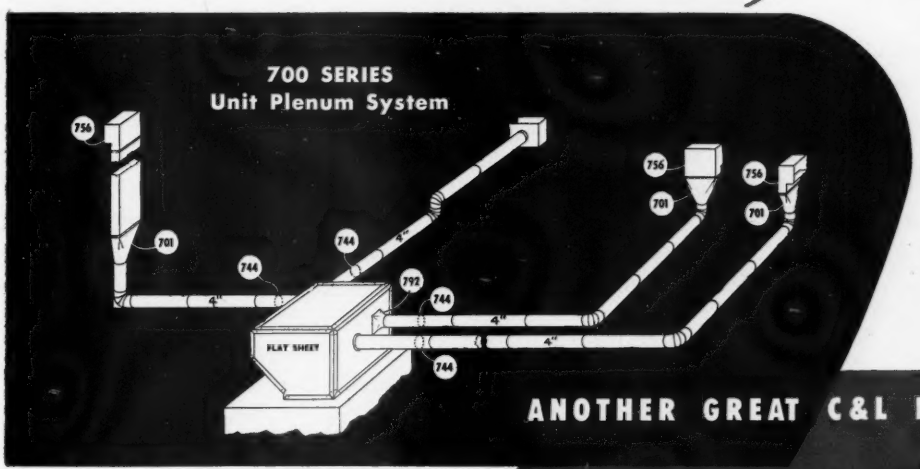
Two basic trademarks, a monogram and a signature, will be put into use after two years' work by company executives, cooperating with the noted industrial designer Henry Dreyfuss. A 16-page illustrated trademark book

The New LAMNECK Simplenic 4" SYSTEM

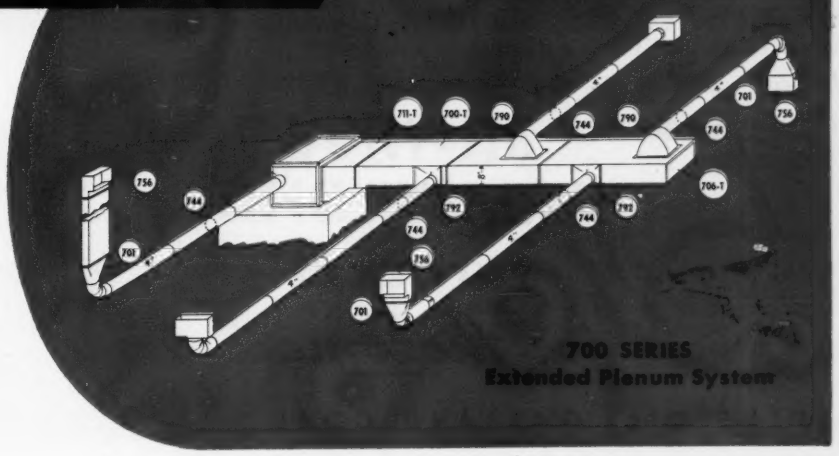
SAVES 30%

on .....

DUCT COSTS
FITTINGS
AND THEIR
INSTALLATION



ANOTHER GREAT C&L PRODUCT



Shown here are *all* the fittings necessary to make a Simplenic 4" installation. This new Lamneck System is ideal for small homes with basements or crawl spaces. It offers the most ideal comfort conditions yet developed by the Warm Air Heating Industry.

NOTE: A new design and installation manual for the Simplenic 4" System is now available. See your Lamneck jobber or write direct.

IT'S SIMPLE—IT'S PROFITABLE—IT'S EFFICIENT

Look to Lamneck for Leadership

Simplenic SYSTEM
* T.M.
Lamneck
FURNACE PIPE & FITTINGS

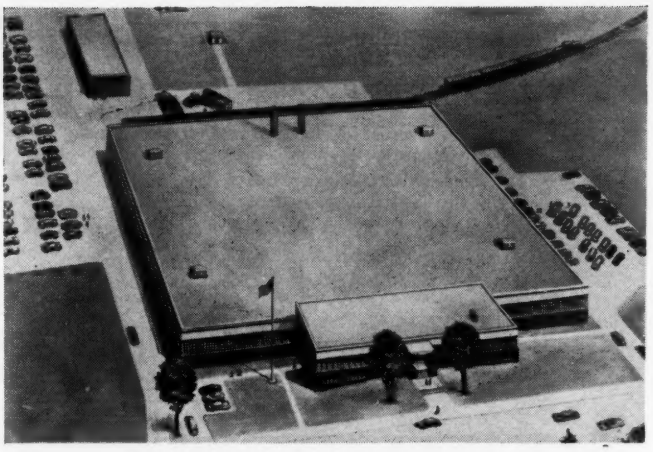
Write for the Industries new reference manual on Standardized Fittings.

CLAYTON & LAMBERT MFG. CO.
1701 Dixie Highway
LOUISVILLE 10, KENTUCKY

fueloil & oilheat

carefully details the proper use and limitations of the new trademarks. All name identification on products, packages, displays, signs, literature and advertising will conform to practices outlined in the manual.

The monogram is boxed by the characteristic Honeywell rectangle and consists of a capital "H" with "Honeywell" centered beneath. The full-name trademark spells out "Honeywell" in heavy lettering while "Minneapolis" nests on top. A handwritten legend, "First in Controls," accompanies this trademark.



The new Commercial Filter Corp. *Melrose, Mass. plant will be opened this month. The plant consists of three buildings with total area of 135,000 feet. All buildings are fireproof and contain many special features.*

Commercial Filters to move to new Plant this Month

THE COMMERCIAL FILTERS CORP., Boston 27, Mass., will move its plant this month from Boston to Melrose, Mass. The new plant has been carefully planned to provide every advantage afforded by the most recently developed types of construction and equipment. The Melrose plant consists of three buildings with total area of 135,000 feet. All buildings are of fireproof construction. Special features include: glass-block side walls; perimeter hot water heat and radiant heat floor panels in manufacturing areas; automatically controlled forced air winter heating and summer cooling and fluorescent lighting.

Century Catalog tells its automatic heating Story

"J. A. LATTNER and E. J. Lattner, founders of the Century Engineering Corporation (Cedar Rapids, Ia.), recognize that a product is never better than the people who build it. They insist that the family of Century workers possess the ability and desire to produce the finest automatic heating equipment available. Those responsible for the design and manufacture of Century equipment are constantly guided by one question—How can we make good products even better?"

This statement of principles begins a complete catalog put out by Century Engineering Corp. covering not only

5 oil-fired ARMSTRONG furnaces for the small home

PLUS OIL, GAS AND COAL FURNACES FOR EVERY SIZE HOME

You can tackle the small-home heating problem with confidence when you sell Armstrong. You've got *five* different gun-fired oil furnaces from which to choose. A hi-boy, a horizontal, a counterflow and a basement model, all at 80,000 BTU output, and a 100,000 BTU gravity furnace. Every one of them a heating-plant you'll be proud to sell because it looks good, is good and installs without wasted effort.

If the larger-home market is important to you, you can handle that just as easily. The Armstrong line has models of every type, from the largest to the small, for *every* home.

Yes, the Armstrong line is built *and distributed* for the dealer. It gives him what he must have for profit. It sells especially well now because Armstrong's national advertising is in full swing.

If you want facts, not claims, about the Armstrong profit line, ask your nearby Armstrong wholesaler. If you don't know him, write to us for his name.

Armstrong's two huge plants serve both sides of the continent quickly, economically. A warehousing distributor, with a complete Armstrong inventory, is within a stone's throw of everywhere. Wherever you are, Armstrong's distribution system is set up to serve you. It's better, quicker, more profitable . . . for you.

ARMSTRONG FURNACE COMPANY

COLUMBUS, OHIO — DES MOINES, IOWA

Please address Dept. FO at our plant nearest you.

Warm Air Furnaces—Gas, Oil, Coal—a Complete Line

"We ask suppliers to include it on their original equipment"

– that's how strongly Bert Yoakum, of Kansas City, feels about the Honeywell Flexible Element Furnace Control!

Bert Yoakum, left, manager of Waldo Sheet Metal & Furnace Co., and Honeywell salesman Rod Sieck

"We're *so sold* on the L486 we have repeatedly urged our suppliers to include it on their original equipment, before it leaves the factory.

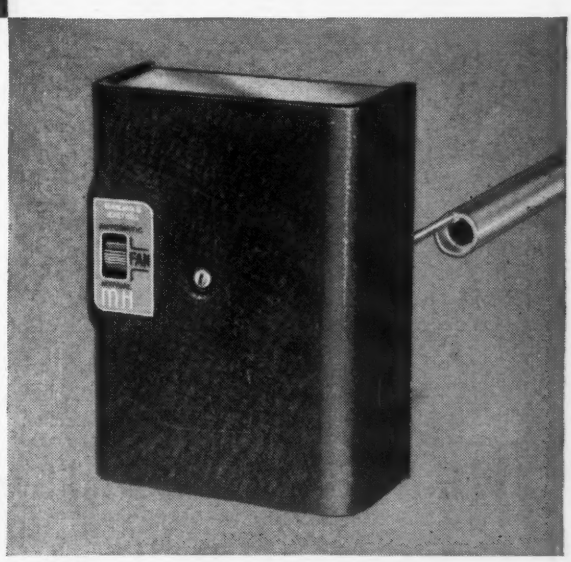
"Through experience, we've found it's the *only* combination flexible element control for furnaces that is absolutely fail-safe; the *only one* that gives our customers 100% protection and eliminates all danger of fire hazard.

"Like all Honeywell equipment, it's simply a better, safer control for the money; so useful and so practical that we would like all of our suppliers to include the L486 as part of their original equipment.

"For both replacement and modernization work we've found it's also a very easy control to apply in the field. It can be mounted in practically any position—in fact, we haven't come across an application yet that has given us installation difficulties."

H HONEYWELL

Another Plus-Profit Product from Honeywell



Give your jobs positive protection! Specify the Honeywell "L486"

The flexible element furnace control gives your jobs 100% protection all the time. If sensing element ruptures, it breaks burner circuit and starts fan—it's *fail safe!*

Can be mounted inside or outside furnace casing or even remotely, up to 60 inches from sensing element. Snap-switch makes mounting in any position possible. Has easily accessible summer-winter switch. "Out-of-top" model also available. For full facts call the Honeywell office nearest you; or write Honeywell, Dept. FH-7-171, Minneapolis 8, Minn.

MINNEAPOLIS **Honeywell**

First in Controls

fueloil & oilheat

Everyone Can't Sell . . .

BUT ALMOST ANYONE CAN LEARN TO SELL...

SPECIAL PRICE

THE SELLING MAN (WE PAY POSTAGE) **$4.00** A COPY

For the benefit of those breaking into selling and for improvement of active salesmen, W. A. Matheson, a director of Eureka Williams Corp., wrote an exciting book on selling techniques that has helped thousands get ahead faster. He calls it THE SELLING MAN. He believes that almost anyone can sell if he'll take the trouble to learn. The techniques he suggests are practical because he has tested them himself. The $4 investment is a tiny price for so much helpful and profitable information to attain greater success.

MAIL REMITTANCE WITH ORDER.
NO C.O.D. ORDERS.

●

HEATING PUBLISHERS, Inc.
2 W. 45 St., New York 36, N. Y.

its heating equipment line but also price listings, accessories, parts list, sales promotion material and numerous bulletins.

It is a loose-leaf bound catalog which permits any supplementary information to be conveniently slipped in so that the catalog can be kept up-to-date. Also a thumb index is used to separate each subject heading.

The Century catalog covers its line of oil and gas conversion burners; oil and gas furnaces; steel boilers and water heaters.

Rega Mfg. Co. names Thurston as Representative for Filter

REGA MFG. CO., Rochester, N. Y., has appointed Thurston, Inc., Whitestone, Long Island, N. Y., as exclusive representative for all of New England and the mid-Atlantic states on their Rega fueloil filters.

Coin test used to check Vibration of Anchor Model

ANCHOR DIV., Stratton & Terstegge Co., New Albany, Ind., uses a test to quell doubts expressed by some Anchor dealers that the new Anchor Model SA oilburner would pass a vibration test involving the balancing of a coin on top of the burner while the motor was running. To convince them, Anchor officials decided to put the proof on wheels and take it to the dealer.

Station wagons, equipped with Anchor SA oilburners, traveled to the dealer's place of business. The burner was started and the dealer had the opportunity to try the test for himself.

Major personnel Changes by Sinclair Refining announced

SINCLAIR REFINING CO., New York 20, N. Y., announced the following changes in sales personnel:

Ernest L. Hughes now heads the newly-created post of director of property acquisitions with headquarters in Chicago. He was formerly vice-president and director of marketing. J. E. Dyer succeeds Hughes and J. A. Ahearn succeeds Dyer as director of transportation, supply and distribution.

M. F. Braeckel was appointed man-

AUTOPULSE ..tips the scales

to get you more sales

You will sell more oil burning appliances when you sell each one equipped with an Autopulse Electric Fuel Oil Lifter because any oil burning appliance becomes more desirable when you add the automatic fuel supply feature. And Autopulse is *fully* automatic, it turns on when the burner needs fuel — off when the supply is replenished. Even when you are facing a customer who really needs the equipment — but just doesn't seem to be able to make up his mind — you can tip the scale in your favor by showing the prospect how little it costs him to have the extra convenience of automatic fuel supply — and the sale too, is automatic. Especially when the Autopulse Electric Fuel Oil Lifter is not only the best, but it is also the lowest priced. Stock the Autopulse Electric Fuel Oil Lifter and you will not only make more sales — you will add extra dollars to every sale you make. Write today — for complete information.

AUTOPULSE helps you meet competition from other automatic fuels

1. *Your Customer gets automatic fuel supply for less money than he would have to pay for any other Electric Fuel Oil Lifter.*
2. *The extra comfort and convenience that Autopulse offers, helps you sell in competition with other automatic fuel systems.*
3. *Autopulse is easy to install.*

Stock Autopulse and you increase both your sales and your profit.

AUTOPULSE *your automatic fuel supply*

AUTOPULSE CORPORATION 218 E. Dowland St., Ludington, Mich.

ager of wholesale marketing, succeeding Harry H. Fuller who will continue as vice-president in an advisory capacity.

Leo J. Hoar, formerly manager of the Southeastern district, was promoted to manager of station sales with headquarters in New York. D. M. Hills will succeed Hoar in his vacated position. Hills was area manager for Tennessee.

Louis W. Leath, has been promoted to assistant general sales manager with headquarters in New York and B. P. Mackenzie steps up into Leath's vacated spot as manager of the Eastern district sales.

W. D. Cross, Jr., previously manager of sales, Southwestern district, is now manager of the Central district with headquarters in Chicago. O. F. Birkett takes over Cross's job.

Brown L. Meece, vice-president in charge of marketing of the Western division now has charge of wholesale sales in the Western district.

A. H. Sus has been appointed special consultant to the vice-president and director of marketing, leaving his job as manager of the central district.

Carey Mfg. Co. develops Manual as Service to warm air Field

PHILIP CAREY MFG. CO., Lockland, Cincinnati 15, O., as a service to the air conditioning industry, has developed a complete specifications manual on its entire line. The manual has numerous specification sketches, detailed with dimensional information and descriptive installation procedures in easy to follow, step-by-step, sequences. Construction features, available sizes and conversion charts makes this an extremely valuable aid for anyone doing duct work.

The "Cary Duct" manual, for example, on the subject of asbestos insulated duct discusses simple 90° elbows, stackheads and increasing elbows, construction of fittings, dampers, accessories, conversion chart of metal duct sizes to Careyduct stock sizes, installation details, method of erection, insulation characteristics and many more important details.

Copies of the manual are available free, on request. Write to: Philip Carey Mfg. Co., Lockland, Cincinnati 15, O., for the "Cary Duct" manual.

Catalog on product Listings prepared by McDonnell-Miller

A 24-PAGE CATALOG has been published by McDonnell & Miller, Inc., Chicago 18, Ill., which is designed primarily as a workbook to help in the selection and application of the company's safety devices for steam and hot water boilers and heaters. The handbook is an enlargement of an earlier publication by McDonnell & Miller.

The book is organized to display the various products according to function: Water Feeders for steam and hot water boilers and for receiving tanks; Low Water Fuel Cut-Offs for low and high pressure boilers; Float Operated Switches; Temperature and Pressure Relief Valves; Float Valves and related miscellaneous products.

Included are the many specialized variations adapted for original equip-

the Mt Hawley "BUDGETEER"
PACKAGE UNIT FOR CLOSETS OR ALCOVES
510' WATER OIL OR GAS
Meets F.H.A. and Underwriters requirements for closet installations of 1" clearances and 65° room temperature rise.
So compact is the BUDGETEER that it fits in a closet 22" x 44" and still allows room for burner removal and servicing.
Finished like fine furniture, you can be proud of its appearance if it sits out in a utility room.
Saves hours of expensive installation labor, as it comes completely jacketed, ready to set in place — no assembly required.
IDEAL FOR ANY FORM OF HOT WATER HEAT
No matter whether it's radiant panels in ceiling or floor, baseboard or convectors, the BUDGETEER brings the temperature up quickly when the controls ask for it — all due to ample combustion area and extra large heating surfaces.
QUIET AND EFFICIENT
Fitted with Mt. Hawley's own aluminum oil burner, the BUDGETEER is noted for its smooth, easy start, freedom from vibration and rumble. Good CO2 and 80% or higher efficiency factors are easy to get even with ranch type houses with low chimneys.
The BUDGETEER CAN BE CONVERTED FROM OIL TO ALL GASES WITHOUT MAJOR OVERHAUL.
1 of 9 popular Mt. Hawley models. For literature describing the entire Mt. Hawley line, write Dept. 1A.
H McoM
Mt Hawley MFG. CO.
PEORIA 4, ILLINOIS

CONGRATULATIONS *fueloil & oil heat*

on 30 years of accurate reporting

SINCE there was a Shell advertisement in the very first issue of Fuel Oil & Oil Heat thirty years ago, it is only natural that we at Shell join in the celebration spirit.

Thirty years have seen great growth and many advances in the industry, and the able leadership of F O & O H's editors has taken a prominent part in those advances.

Shell's part might be considered too, if you will pardon the mention!

In 1929 the Shell Fuel Oil Research Laboratory was established at Sewaren, N. J., where work has been going on continuously to develop better fuel oils and advanced methods of using them. Shell research has come up with improved fuel oil uniformity and cleanliness; with the Shell-developed Combustion Head which has been released to oil burner manufacturers without royalty and the Shell "Smoke Meter"—the device which translates smoke content of flue gases into terms of heating efficiency.

And, of course, FOA-5X, the fuel oil additive that prevents clogging of filter screens.

Sewaren is working on some new projects that promise still more of the benefits of Shell research which have proved valuable to the manufacturer, the distributor and the consumer alike.

SHELL OIL COMPANY

SHELL

ment use, plus various components as they have been utilized for liquid level control applications.

Heavy-Oil Distributor holds school for Dealer in Brooklyn

HEAVY - OIL - BURNER DISTRIBUTORS, New York 58, N. Y., conducted a sales, service and installation school for the Modern Oil Supply Co., Inc., Brooklyn.

Henry Wymbs, assisted by George Knittel of Hev-E-Oil Burner of Brooklyn, Inc., explained the basic principles of operation, maintenance and service of the Hev-E-Oil burner. Thomas Walczak outlined the sales advantages of Hev-E-Oil burner equipment.

Attending the school were Harry Fish, Sam Fish, Jerome Gleekel, officers of the Modern Oil Supply Co. and thirty men of the company's sales and service departments.

Jackson & Church to develop new type Catapult for Navy

A CONTRACT for developing a new type catapult for launching U. S. Navy carrier-based aircraft has been awarded Jackson and Church Co., Saginaw, Mich., by the Dept. of Defense.

The Navy Bureau of Aeronautics announced the project is "to make provision for catapulting new types of planes and to fulfill the Navy's demand for smooth functioning equipment that will launch aircraft at a fast pace."

A skit *centering around a visual demonstration of low pressure vs high pressure burner operation proved one of the most popular attractions at recent regional meetings of the Williams Oil-O-Matic Div., Eureka Williams Corp., Bloomington, Ill. The meetings, held in 19 cities over the nation, acquainted dealers and their salesmen with Oil-O-Matic plans for the year. Shown acting their parts at the Chicago meeting are, left to right, E. H. Davison, Oil-O-Matic general sales manager, T. H. Green, Oil-O-Matic manager of dealer retail activities, N. A. Palmer, Oil-O-Matic unit sales special representative and W. K. Johnston, Oil-O-Matic national service manager. C. S. Stackpole, vice president, Williams Division, was a key speaker at all of the meetings.*

The firm's two plants will continue normal operations, which includes the manufacturing of furnaces.

York makes feedwater system Kits for industrial Boilers

THE INDUSTRIAL DIV., York-Shipley, Inc., York, Pa., are now manufacturing under the trade mark, York-Power, feedwater systems for industrial boilers which can be purchased as complete systems or in four separate kits for specific jobs.

The four kits which go to make-up the complete York-Power Feedwater System are the make-up assembly, heater assembly, receiver assembly and complete pump assembly. Each kit can be purchased separately.

Canadian National to use new-type Heating, says M-H

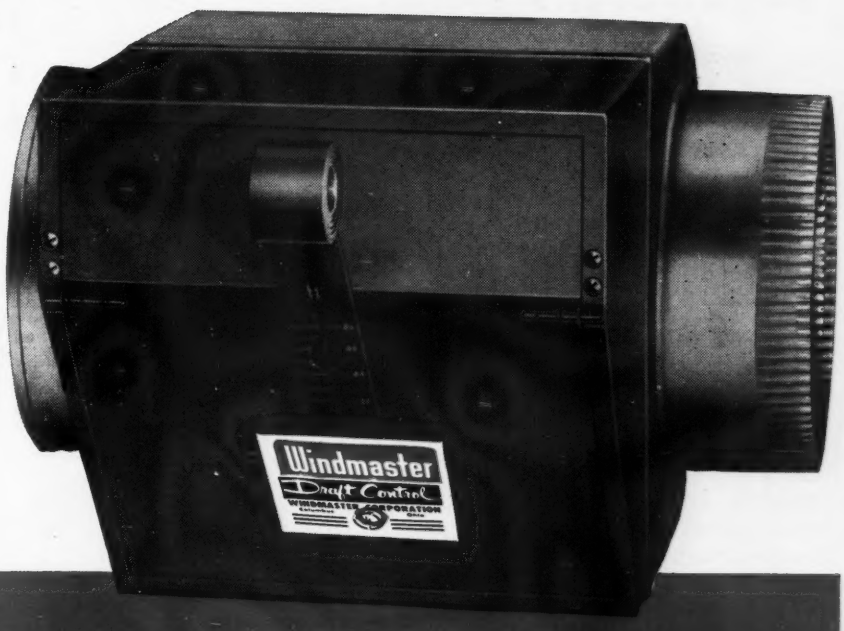
CANADIAN NATIONAL RAILWAYS will be the first railroad on the North American continent to acquire new cars featuring electronically controlled heating comfort for passengers.

This was disclosed by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., when it announced that its electronic type heating system will

at last!
Fully Automatic WALL & FLOOR OIL FURNACES by KLEER-KLEEN
NO PILOT FLAME
• 16 MODELS to choose from. For every home and every budget.
• FORCED AIR CIRCULATION guarantees proper distribution of warm air throughout the house.
• UP TO 100,000 BTU
All KLEER-KLEEN Models and All Parts Thereof Are Listed by Underwriters' Laboratories, Inc.
Furnace lights itself— regulates itself.
Yes . . . KLEER-KLEEN's new Electric Ignition burner ends old-fashioned pilot flame woes! Once the thermostatic controls are set . . . KLEER-KLEEN's Electric Ignition takes over for smooth, efficient operation under ALL conditions! Pilot-type burners available on option.
Just Set it... and Forget it! KLEER-KLEEN ELECTRIC IGNITION Does the Rest!
Distributorships Available in Some Areas
KLEER-KLEEN
MANUFACTURING CO. OAKLAND, CALIFORNIA
America's Finest Furnaces

it costs no more to

give your customers this extra quality



Windmaster®
Draft Control

Sets new Quality Standard

Compare price and you'll see that Windmaster is competitively priced with ordinary draft controls. Compare quality and you'll see that Windmaster has set a new quality standard. Just look at all these extra quality features you can now give your customers at no extra cost:

• more square inches of effective area • permanently die-stamp indented calibrations • spherically-seated, stainless steel bearings • precision sheet metal craftsmanship • scientifically designed balance • exclusive time-saving adapter • two useful styles for all jobs • rigid inspection and testing • all parts rustproofed for longer life • available in all sizes 6" through 24" • perfect glove-snug fit • high grade, heavy gauge steel • hemmed collars for maximum rigidity • easy-to-read, hang-up instructions • packed in freight-tested, clearly marked carton • modern baked enamel finish • vertical and horizontal flue compensation • snap-lock holds permanently • quiet, foolproof, accurate operation

To cash in on this first real improvement in draft controls in 20 years, send for literature and details today. Sold exclusively through leading jobbers and manufacturers.

Windmaster Corporation

DEPT. C
899 Ingleside, Columbus 8, Ohio

Windmaster Draft Control

be installed on five new passenger coaches to be built by Pullman-Standard Car Mfg. Co. for the Grand Trunk Western Lines. The cars are scheduled for delivery in 1953.

The new type heating system incorporates heating principles long used in homes and commercial buildings. Hot water containing anti-freeze solution is employed, rather than steam, and the entire system is automatically controlled by electronic thermostats that maintain even temperature regardless of outside weather conditions.

Burnham Boiler holds annual golf Tournament

THE 21ST ANNUAL invitation golf tournament, sponsored by Burnham Corp., Irvington, N. Y., took place on June 23 at the Tamarack Country Club, Greenwich, Conn. Nearly 120 golfers and other guests enjoyed the festivities.

First prize among the 80 golfers went to Chris Jensen of Perfex Corp.; second was Al Hall of Burnham; third was Charles Smith, Atlas Steel Construction; fourth was Dick Sweet, Vulcan Radiator Co., Hartford and fifth, K. E. Bush of Burnham.

Fred Kuss, Frank Brophy, Joe Pearce and Al Hall, all of Burnham, constituted the Golf, Greens, Tournament, Handicap and House Committee which made arrangements for the affair.

Trailmobile makes Award to "Driver of the Year"

THE TRAILMOBILE "Driver of the Year" trophy, presented annually by the American Trucking Associations, Inc., has been awarded to Allen C. Sagerhorn, a 36-year-old truck driver of Barnesville, Minn., who drives for Consolidated Freightways. Presentation was made in Washington by Ralph B. George, eastern sales executive of Trailmobile, Inc., Cincinnati 9, Ohio, after which Sagerhorn and his wife were received by President Truman in a public ceremony in the President's executive offices.

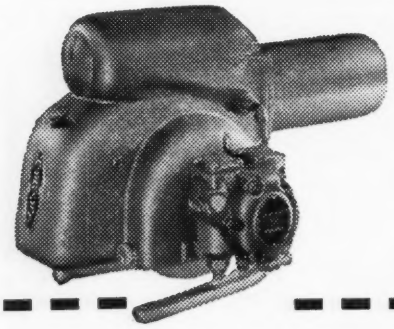
Sagerhorn, who was selected primarily because of courtesy and safety on the highway, has driven commercial vehicles since 1941 without an accident and has performed two heroic deeds, one of which involved the rescue from death of a man trapped in a burning car.

❖

Judge William A. Kelly, head of Cummings and Lockwood, Stamford, Conn. law firm, was elected treasurer by the board of directors, Peabody Engineering Corp., New York 19, N. Y. He will fill the vacancy created by the resignation of C. A. Snider, one of the founding directors of Peabody Engineering Corp. in 1920, who is retiring as treasurer but will remain as a director.

Paul G. Blazer, chairman of the board, Ashland Oil & Refining Co., Ashland, Ky., was the recipient of an honorary Doctor of Laws degree at the University of Kentucky's 85th annual commencement in Lexington, Ky. This is the second honor conferred on Blazer by the university. He received the Sullivan Medallion as the outstanding Kentucky citizen in 1948. Blazer has spent most of his business life in Kentucky as head of Ashland Oil & Refining Co.

Eliminate return service calls and increase your profits . . .



HERCO

Residential

OIL BURNER

You can eliminate those profit-stealing return service calls when you install the HERCO RESIDENTIAL. Because this Burner is engineered on sound principles throughout, with protected motor and electrical parts, it will operate for years with a minimum of check-ups. The service free operation of a HERCO RESIDENTIAL means satisfied customers . . . your best reputation builders!

Two Service Features You'll Appreciate:

So accurately made that parts can be interchanged from other HERCO models.

Every HERCO is factory-fired and pretested before it is shipped to you.

DON'T STAKE YOUR REPUTATION ON AN INFERIOR BURNER WHEN HERCO IS THE "LAST WORD" IN QUALITY

Send for these three folders, describing in detail the HERCO family of fine oil burners. If you are interested in selling dependable burners with a profit you can pocket for keeps (without costly service calls), then send coupon below, today.

HERCO OIL BURNER CORPORATION
LANCASTER, PA.

Dear Sirs:
I am interested in learning more about the HERCO RESIDENTIAL and other HERCO models. Please send me the three dealer folders. I understand that I am under no obligation.

HERCO *The Oil-Thrifty* OIL BURNER

Name .....

Address .....

City .....

here's why TACO CIRCULATORS give more for your money

YOU GET

1. EXTRA CAPACITY

(on smaller sizes)

FULL 1½" CAPACITY FOR ALL SIZES { ¾"—1" / 1¼"—1½" }

Taco circulators have that extra capacity needed for today's modern small pipe radiant heating jobs (panels, convectors, radiators or baseboards).

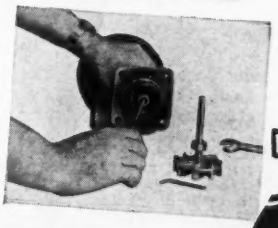
2. LESS AND MORE FLEXIBLE INVENTORY

(on popular sizes)

Interchangeable flanges mean one circulator plus four sets of flanges (¾", 1", 1¼" or 1½") equals four sizes of circulators in stock.

3. A CINCH TO SERVICE

All you need is an open end wrench, screw driver and allen set screw wrench. Taco's carbon seal runs against a stainless steel seal eliminating any wear in bracket.



Better Heating-Better with Taco

TACO HEATERS, Incorporated
137 South Street, Providence 3, R. I.

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

OHI of New England elects Directors at annual Meeting

THE ANNUAL MEETING of the Oil Heat Institute of New England, Boston 15, Mass., was held Wednesday, May 14 at 2:30 p.m., in the Hotel Bradford, Boston. Eight new directors, to serve for three years, were elected: Jerome W. Cross, Cross Coal Co., Lawrence, Mass.; C. Everett Elliott, Charles L. Elliott Co., Danvers, Mass.; Marcel A. Fugere, Manchester Coal & Ice Co., Manchester, N. J.; Stanley A. Hultman, C. V. Hultman & Sons, Inc., Brockton, Mass.; Spencer A. McLellan, Geo. E. Warren Heating Corp., Lynn, Mass.; Francis J. Murphy, F. J. Murphy Oil Co., Bristol, R. I.; Joseph Olney, Jr., Olney & Payne Bros., Inc., Pawtucket, R. I. and Irving R. Patterson, City Oil & Coal Co., Inc., Torrington, Conn.

The Annual Directors' Meeting was held the same afternoon, at 4:30 p.m., in the Hotel Bradford. Officers elected for the coming year were: president, Joseph Olney, Jr.; 1st vice-president, C. Everett Elliott; 2nd vice-president, A. L. Dwelley; secretary-treasurer, Fred N. Beckwith.

Elected to represent the Associate Members were K. O. Ralphs for the burner manufacturers, Wilson O. Smith for the accessory manufacturers and Everett L. Kimball for wholesale suppliers.

New York Oil Heating group to hold field Day July 15

THE ANNUAL GOLF TOURNAMENT AND FIELD DAY of the New York Oil Heating Association, Inc., New York 18, N. Y., is scheduled for July 15 at the Winged Foot Golf Club, Mamaroneck, N. Y., with all the traditional activities planned.

In addition to the golf tournament, a baseball game between the manufacturers and dealers will be played. Lunch, golf and a dinner at which prizes were distributed rounded out the day's program.

Missouri Oil Men urged to take interest in Education

"INDUSTRY AND EDUCATION must work together in order to help create a higher standard of living in the United States," Ray Gremp, Jr., educational vice-chairman, Missouri Oil Industry Information Committee, said at a meeting of the Southwestern Missouri Oil Men's Club, June 9, at Wilder's Cafe in Joplin, Mo. Gremp, who is a public relations representative for the St. Louis sales division of Standard Oil Co. (Indiana), pointed out to the group, that through the interplay of industry and education, the standard of living in the United States has risen to the highest that has ever been known.

The speaker urged the oil men at the meeting to take a more active interest in education and to help advise stu-

NOW...
a new highly efficient burner for BOTH GAS and OIL

DUAL
syncro GAS•OIL flame
BURNER

Compact, simple and efficient—Easy to Install on any standard heating unit!

After years of searching for a truly efficient combination gas and oil burner, gas company engineers designed and developed the new Syncro-Flame Dual Burner. It is truly outstanding in versatility and economy . . . the perfect combination burner for residential, commercial and light industrial use. The new Syncro-Flame Dual Burner switches instantly and automatically from gas to oil or from oil to gas when a specific outside temperature is reached.

Write Today for Complete Data Sheets

NEW ILLUSTRATED BULLETIN describes the available models of Syncro-Flame in complete details. Send a card or letter for your copy today!

ASK ABOUT SYNCRO-FLAME'S COMPLETE LINE OF GUN-TYPE OIL BURNERS FROM 1 to 20 gal. per hour capacity.

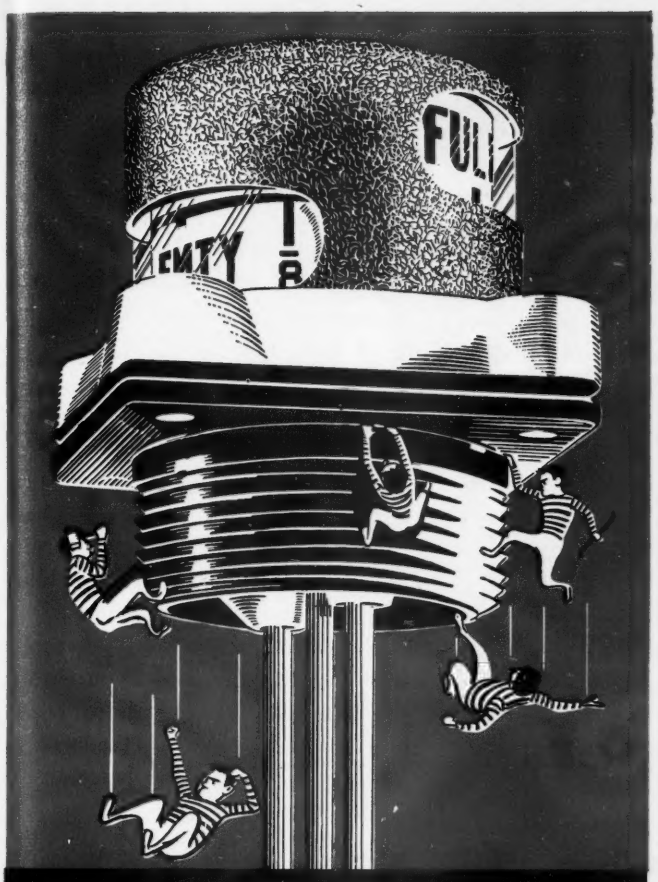
Distributorships Available

Several valuable territories are now open for distributors. Synchronous Flame, Inc. will be glad to furnish full details without obligation.

CHECK THESE OUTSTANDING FEATURES:

- Automatic, electronic ignition eliminates pilot light when burner is not operating.
- Ignites quietly—burns with a clean flame—no puffs, flashbacks or soot.
- Electronic safety controls shut off burner in case of flame or power failure.
- Finest quality workmanship and materials for long, dependable operation.
- Patented tube design permits radiant, swirling flame with either oil or gas.
- Lockout switch prevents both fuels from burning at same time.
- Burns any type gas—and number 1 to 3 oil.
- Easy to install—easy to service.

SYNCHRONOUS FLAME, INC.
329 SOUTH LA SALLE STREET • CHICAGO 4, ILLINOIS



Lock up "trouble-bugs"

with

Rochester

"DUAL-DIAL" GAUGES

Fumes, seepage and other "trouble-bugs" are permanently *sealed in* with Rochester DUAL-DIALS. No time is wasted on nuisance calls . . . customers are satisfied . . . extra profits are assured!

Permanent magnetic indication transmits the float-arm action through the solid gauge head. *There are no holes to worry about.* Pressure-tight, leak-proof construction gives years of *trouble-free* service . . . even under pressure.

The easy-to-read "dual-dial" can be seen from both front and back... makes tank checking and filling a snap.

Rochester DUAL-DIALS are Underwriters' listed and *more than* 2½ *million* are now in use. They're easy to install and stocked by leading wholesalers everywhere for all standard basement oil burner storage tanks. Rochester Manufacturing Co., Inc., 19 Rockwood St., Rochester 10, N. Y.

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

Rochester

MANUFACTURING COMPANY, INC.

DIAL THERMOMETERS GAUGES AMMETERS

ROCHESTER DEPENDABLE ACCURACY GAUGES

SPEEDY INSTALLATION PACKED WITH SAVING POWER in a VENKO PACKAGED UNIT by Koven

HOURS Saved

Completely Equipped for Quick Installation

FUEL Saved

Modern Design and Selected Controls

SPACE Saved

Compact — Rugged — Beautiful

Two Sensitive Aquastats

Economical HEAT AND HOT WATER

Built to fit the modern home

Such value! That's consumer talk for Venko — the little boiler that gives the biggest dollar's worth of service. And here's the reason. Two sensitive aquastats assure a steady supply of economical heat and hot water. Modern design and selected controls net real fuel savings — years of trouble-free performance. Of course—installers have a word for Venko, too—time saver—because Venko comes completely equipped for speediest installation. All wiring in place. All parts properly installed. All controls thoroughly tested. Translated into dollars and cents this means no costly waiting for missing parts — no profit eating service calls—increased installations . .

FREE

But carries a wealth of facts — so write for your KOVEN 1952 PLUMBERS HANDBOOK today.

NATIONALLY ADVERTISED

WATERFILM BOILERS, INC.

a division of L. O. KOVEN & BRO., INC.

154 Ogden Ave., Jersey City 7, N. J.

Plants: Jersey City, N. J. Dover, N. J.

dents who seek information about careers in business and industry.

James O. Kemm, Kansas City OIIC district representative, also addressed the group.

Boston Old Timers Club holds pleasant and successful Outing

SEVENTY-FIVE MEMBERS and friends attended the annual outing of the Boston regional Old Timers Club, Friday, June 20th, at the Marlboro Country Club, Marlboro, Mass. Skipper Barr, regional chairman, was in charge and a pleasant day was enjoyed by all. Events included luncheon, golf and other athletic games and a lobster dinner.

The committee included Ed Isaac, Al Johnson, Wayne Hartwell, Bo Francis, John Ivester, Fred Beckwith, Everett Wolfe, E. L. Kimball, Charles B. Soper, Herb Carriger, Lou Giannettino, John Walsh, John Landermann, Gus Dwelley, Wes Plummber, Warren Jennings, Harry Deacons, Lew Sweatland and Fay Kinnee.

Wes Plummer acted as official photographer; Frank Scully played the piano and led the singing and Herb Carragher won the golf prize. Door prizes were distributed to everyone who attended.

OHA of Maryland holds summer oilburning Courses

THE SCHOOL COMMITTEE of the Oil Heat Association of Maryland, Inc., Baltimore 1, Md., has been holding a summer course for oilburner service men at Vocational School 253, Loch Raven Blvd. & Fillmore St., Baltimore. Instruction concentrates on summer clean-ups as well as ordinary service problems. The school is being held on Mondays and Wednesdays.

Graduation night for the regular winter class of oilburner mechanics was held at the Hotel Stafford. Diplomas and copies of the "Handbook of Oil Burning" were distributed to the graduates.

Wisconsin OHA hears Report on newspaper ad Campaign

WISCONSIN OIL-HEAT ASSOCIATION, INC., Milwaukee 2, Wis., held its regular monthly meeting at the Variety Club, Wisconsin Hotel, on June 26.

One of the highlights of the meeting was the report made by the Advertising Committee which is running ads in the *Milwaukee Journal* every Wednesday and Sunday.

Also the treasurer and executive secretary made a complete report on the Club's Annual Rally held May 23.

Steel Boiler Institute holds annual Meeting in Hershey, Pa.

SIXTY-FIVE MANUFACTURERS attended the annual meeting of the Steel Boiler Institute, Philadelphia, at Hershey, Pa., May 12 and 13. Four new directors were chosen: Paul K. Addams, president, Fitzgibbons Boiler Co., Inc.; Paul M. Fleming, vice-president, The Bigelow Co.; Elbert M. Palmer, vice-president, Kewanee Boiler Corp. and Howard B. Steggall, vice-president, Pacific Steel Boiler Div., U. S. Radiator Corp.

R. A. Locke, president of the group, made a report on the volume of business in the steel boiler industry for 1952 up to April 27. During this period, shipments amounted to 93 per

the magic operation of H.C.Little oil burners

makes them easy to sell... eliminates costly service calls!

Because H. C. Little Oil Burners are equipped with the magic of H. C. Little low-voltage electric ignition, they automatically light themselves—yet have no pilot light, no high voltage spark! In the event of electric power failure they may be operated by hand until electric power is resumed—an amazing advantage!

This means that you can offer your customers fully automatic oil heating, thermostatically controlled, at lowest cost. The patented H. C. Little Progressive Low-Temperature Carburetion principle provides complete combustion of the oil without "cracking"—no soot or hard carbon deposits. Once installed, H. C. Little Oil Burners provide trouble-free operation for years—require no costly service calls—save you a large part of your service expense.

You can profit better by handling H. C. Little Oil Burners. ***Write today for sales discounts and complete specifications.***

LISTED BY UNDERWRITERS' LABORATORIES

BURN LOW-COST FURNACE OILS & CATALYTIC OILS

SAFE, SILENT OPERATION —no motors, no blowers, no fans, no moving parts!

FLEXIBLE CAPACITIES —seven sizes—35,000 B.T.U. to 350,000 B.T.U.

NO RADIO OR TELEVISION INTERFERENCE —no high voltage electrical discharge.

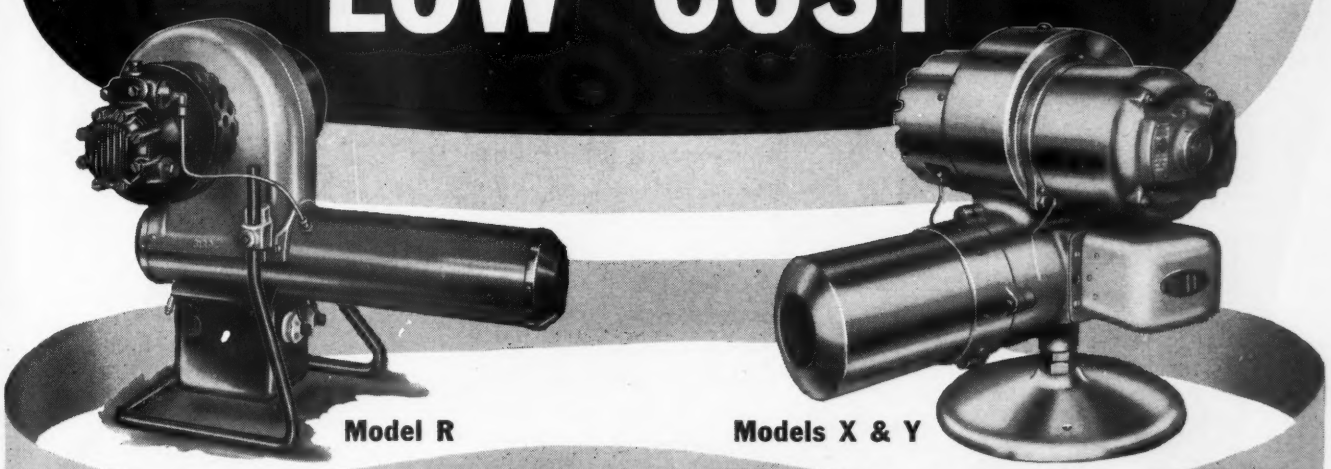
THE LEADER FOR 23 YEARS— more than 200,000 installations!

H.C.Little Burner Company, Inc.

Factory & Head Office San Rafael, Calif.

Factory Representatives in 15 Principal Cities

How to Heat a Home at LOW COST



Model R

Models X & Y

Both Have Patented Band Air Control

Here are two fast selling Master Kraft Conversion Oil Burners — quality built — *priced for the mass market.* These two burners are great profit makers for the authorized Master Kraft dealer. They cover an oil rate capacity from .85 to 5.00 GPH. Both have a powerful selling feature — the fully patented BAND AIR CONTROL. This *rotary* air control helps both the sale *and* the performance after installation.

The two Master Kraft burners shown above, embody the fruits of years of engineering research and development — a revolutionary new principle known as the Band-Air Control (patented). This makes a new type of gun burner that gives a true *rotary cone shaped* fire — making possible an amazing economy on fuel oil.

Here's how Band-Air Control works. The air adjustment on these Master Kraft burners is on the pressure side of the fan — air is forced under constant, full pressure, into end of combustion tube in a ribbon *or band* of air. This causes the air to rotate or whirl down the inside of the combustion tube and out to a point where the air meets the oil spray. This form of air control assures a complete mixture of oxygen with the oil in a strong, revolving motion. The result is a new, hotter type of fire giving higher efficiency and lower oil consumption — excellent with catalytic oils.

You can make *good money* with these burners.

Mail coupon below for more details.

Master Kraft
REG. U.S. PAT. OFF.
AUTOMATIC HEAT

HARVEY-WHIPPLE, Inc.
SPRINGFIELD, MASS.

A PIONEER
IN AUTOMATIC
HEATING

HARVEY-WHIPPLE, INC.
Dept. FO-38, Springfield 2, Mass.

Please send us more information about Master Kraft Model R and X burners.

Name.....

Street.....

City.....State.....

SILENT STEEL
SPLINES
Will Not
Nibble Out!

Pats. Pending

Replace spline couplings which have stripped out, loosened, or become noisy, with this heavy-gauge silent steel coupling. Guaranteed not to strip or loosen. Heavy-gauge steel prevents distortion.

Conventional set-screw couplings available in all lengths and bores.

Our 25th Year

FLEXIBLE COUPLING
MFG. CO.
8145 South Dobson Avenue
Chicago 19, Illinois

cent of the shipments for the similar period of 1950 and 62 per cent of the shipments for the same time in 1951.

Two consumer mailing Pieces Available for OHI Members

TWO BOOKLETS, "Comfort Street" and "Little Rumpelstiltskin," put out by the Distribution Division, Oil Heat Institute of America, N. Y. 16, N. Y., are being made available in quantity to all three of the OHI divisions for use as mailing pieces.

"Comfort Street" gives a simplified, introductory explanation of the various types and applications of automatic heat, together with a strong selling story on oil heat.

The two-color booklet describes the various heating systems in story form using the device of a friendly "visit" to the comfortable, oilheated homes of people who live on "Comfort Street."

The booklet points out that the biggest equipment investment in the consumer's home is in its Heating system —"that's why it pays and pays to choose your heating system carefully." From this point the reader is told the basic facts about automatic heating.

The people who live on "Comfort Street" take over from here and each explain the type of heating system he uses in his home and why—not forgetting to mention that he uses oil.

The booklet ends by telling the consumer to "Choose the fuel that gives you most for your money. There's none better than oil for automatic heating on all counts!" "Automatic, Safe, Sure, Convenient, Clean, Thrifty" are all reasons which are explained to the consumer.

To aid the dealer in his campaign to obtain annual oilburner service contract business, the booklet, "Little Rumpelstiltskin and your Oil Burner Annual Service," is a delightful way for the dealer to sell his services.

The booklet notes important service needs and explains in short paragraphs each one.

"Cleaning and adjusting burner controls; proper lubrication, adjustment; cleaning nozzle and strainers and checking the thermostat" are all described.

For more detailed information contact the Distribution Div., OHI of American, 6 East 39th St., New York.

JIFFY JUICE
BLITZES THRU
CARBON & ASSORTED GOO —

Thousands say you can't beat JIFFY JUICE for cleaning nozzles, strainers, ignitors or any motor part.

It's Fast—It's Thorough—It's Economical and it's Safe.

The JIFFY JUICE KIT is just the thing for handling small parts. The kit is a quart of Jiffy Juice in a wide mouthed can. This can has a removable wire basket to make it easy to fish out the small parts after cleaning. Order a kit to-day and try it out, and you'll never be without it.

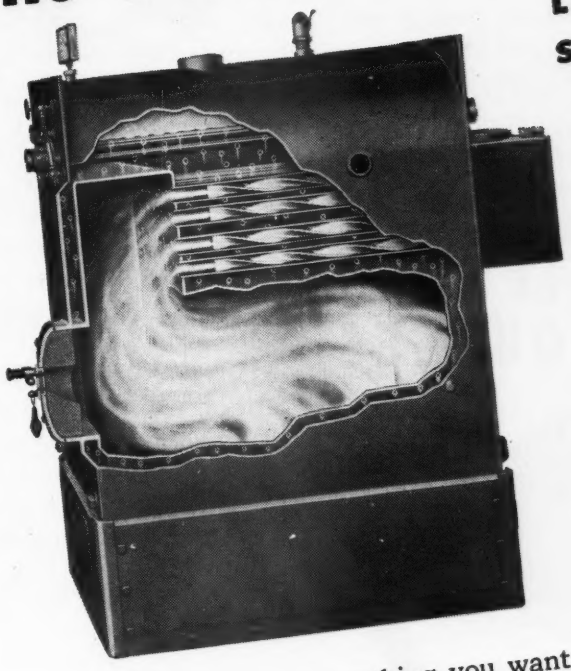
TRADE PRICES
1 QT. KIT
$1.60
1 GAL. REFILL
$4.50

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Sid Harvey stores in Boston: Bridgeport, Mt. Vernon, Hempstead, Valley Stream, Jamaica, Union City, New Brunswick, Newark, N. Philadelphia, W. Philadelphia, York, Baltimore, Washington, Arlington and Norfolk.

The Perfect Answer for Heating

LARGER RESIDENCES—MEDIUM-SIZED COMMERCIAL BUILDINGS 264,000 TO 720,000 Btu.



FITZGIBBONS "80" SERIES STEEL BOILER

● It's got everything you want for heating those "medium-sized" jobs. Strong, steel construction with a generous-sized firebox to insure complete combustion of all the fuel. Quick heat transfer and rapid water circulation add to the efficiency and low fuel consumption. In sizes from 264,000 to 720,000 BTU.'s per hour (S.B.I. net ratings). And everyone appreciates the abundant year-round, tankless hot water provided by the "80" Series boiler with the famous Fitzgibbons TANKSAVER®.

The "80" series Catalog gives complete data. Write Dept. FO 7 for your copy today.

MOST ECONOMICAL IN FUEL — 1886 — THE FITZGIBBONS BOILER — SINCE 1886

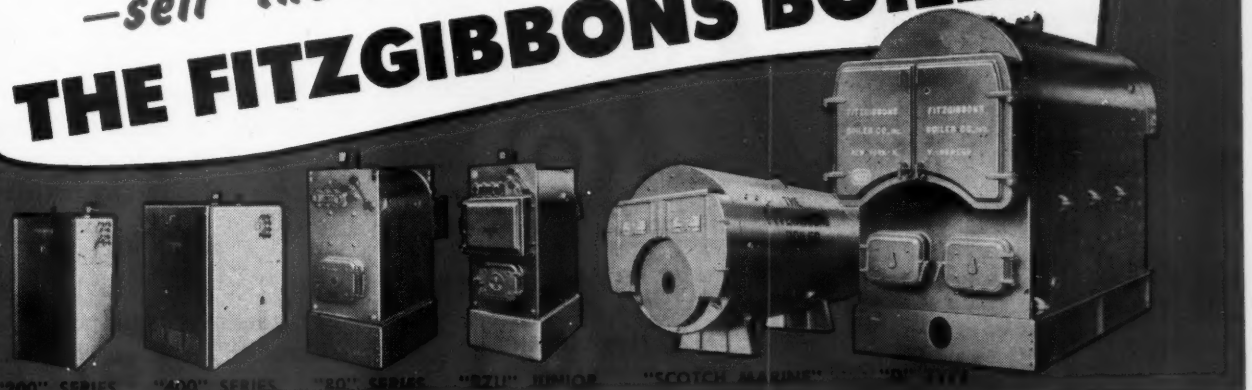
Fitzgibbons Boiler Company, Inc.

General Offices: 101 PARK AVENUE, NEW YORK 17, N. Y.
Manufactured at OSWEGO, N. Y. • Branches in Principal Cities

SBI — STEEL BOILER INSTITUTE — HEATING PROCESS PIONEER

A steel boiler is a lifetime investment —sell "the best in steel boiler heat"—

THE FITZGIBBONS BOILER®



Readers' Forum

CRANTON FUEL OIL CO., INC.
Haverhill, Mass.

Editor:

A short time ago a member of the state fire marshal's office spoke to a group of oil dealers and installers in Haverhill. His subject was the regulations governing oilburner installations and he stressed that these were necessary to protect the public.

Sometime previous to this lecture I examined a gas conversion burner in a steam boiler, a recent installation. There was no low water cutout, no draft regulator, a hand damper was partially closed in the chimney and no effort had been made to hold it open or to prevent its closing. A 4" opening was left in the chimney and finally was closed up by the owner.

Any oilburner installer who left an installation with any one of these conditions would have received a call from his local inspector and would face loss of his installation permit unless he made corrections. I agree that this would be fair, just and necessary for the public safety.

However, nothing was done about this gas installation for we have no rules or laws governing gas installations. When this case was stated to the representative of the fire marshal, he evaded a direct answer, but did admit that his office was powerless to act for want of proper legislation and that the general policy was to let the utilities police themselves. This, as far as I can find out, is general throughout New England.

Is this not discrimination in favor of the utility companies? For, their best selling argument is low-cost installation. At least they are taking full advantage of an unsuspecting public in many like instances and certainly . . . natural gas cannot be fairly judged less hazardous than fueloil.

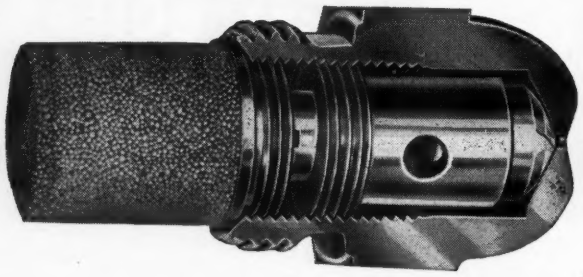
GEORGE H. CRANTON

❖

Vincent P. Black has been named vice-president, Grant Advertising, Inc., serving as account executive on the Chrysler Airtemp and other advertising accounts. Prior to joining Grant, Black was vice-president and manager of the controls division, Perfex Corp., Milwaukee. When Chrysler Airtemp was formed Black was named manager of the service division. He later became Airtemp's advertising and sales promotion manager and, in 1942, was made general manager of Airtemp Construction Corp., a subsidiary firm which handles larger installations of Airtemp equipment. He left Chrysler Airtemp in 1949 to join Perfex.

James C. Daley, chairman of the board, Jefferson Electric Co., Bellwood, Ill., died May 15. Born in 1888, in Kingston, Ontario, Can., he attended Regiopolis College and Queens University in Kingston where he received his degree in electrical engineering. Daley, along with the late John A. Bennan, founded the Jefferson Electric Co. in 1914. In addition to other affiliations, he served on the board of governors, National Electrical Manufacturers Association.

MONARCH NOZZLE FILTERS SOLVE CLOGGING TROUBLES



Take a MONARCH Tip (Stainless Steel) . . . add a MONARCH Porous Bronze Filter . . . Result—Tops in Nozzle Performance without troublesome clogging from dirt!

The MONARCH Filter is equivalent to 200 mesh screen but has the advantage of being strong and rugged one piece construction —no messy felt or numerous parts to lose on the cellar floor. Costs no more than standard 200 mesh screen strainer.

New

"48" Nozzle Box

Don't jumble your nozzles loosely in your tool box like "nuts and bolts" if you expect them to be usable. Carry as many as 48 nozzles securely in this sturdy, compact steel box.

New

Nozzle-Firebox Slide-Chart

No more digging through catalogs for proper nozzle capacities for certain loads, correct fire box sizes for different firing rates, or nozzle capacities at different operating pressures. This pocket slide-chart gives all these (and more) figures at a glance.

DEALERS: Buy from your Monarch Jobber

MONARCH MFG. WORKS, INC.

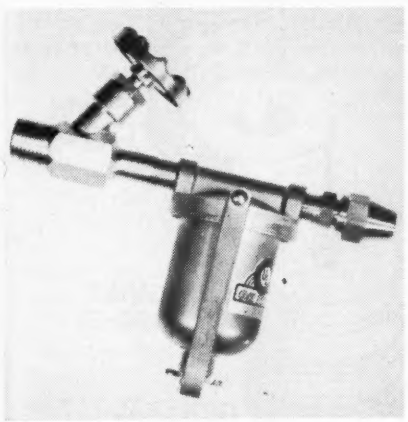
2503 E. ONTARIO ST., PHILADELPHIA 34, PENNSYLVANIA

Canadian Sales Agents: (Except B.C.) Canadian General Filters Ltd., 2679 Danforth Ave., Toronto 13, Canada

New Products

Guardian filter and valve Kit developed for space Heaters

THE GUARDIAN #1906, available for one or two tank installations, is a kit for oilfired space heaters, water heaters and similar units. A single valve



body direct-connects, without angle change or leakage points, the oil filter to the oil tank. The filtering element is Underwriters' listed.

The valve, designed for low oil delivery rates, retains all features of the larger sized Guardian valves, including adjustable packing nuts, brass bar stock and preformed graphite asbestos packing rings. The kit is available with ½" male I.P.T. for tank connection and flared fitting for ⅜" tubing line connection.

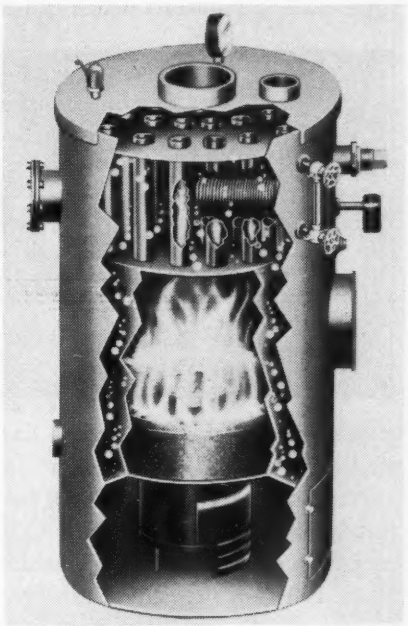
Made by: Guardian Products Corp., Valve Div., 1215 East Second St., Michigan City, Ind.

Circle No. 1 on Card

Portmar develops Boiler for vertical Rotaries

AN ADDITION to Portmar's line is a heating boiler designed for the rotary flame oilburner. Built exclusively for vertical and wall flame rotaries, the boiler is of one-piece construction, featuring scientifically-arranged heavy gauge steel boiler tubes and large furnace volume. The firebox is completely surrounded by water.

The compact, vertical design of the



boiler requires little floor space, with parts accessible for cleaning or service. The Rotary Flame steel boilers, which are subject to hydrostatic test before shipment, operate on low pressure, 15 lbs. steam and 30 lbs. water. Contributing to faster circulation is the placement of the large firebox crown sheet over the hottest boiler water. Flush jackets are provided.

Made by: Portmar Boiler Co., Inc., 193 Seventh St., Brooklyn 15, N. Y.

Circle No. 2 on Card

Refinements for Electrol's semi-commercial Oilburner

ONE OF THE MODELS in the Electrol oilburner line, TMJ, rated from 6 to 12.5 gph, is being offered with refinements that make it better suited to semi-commercial applications. A 6" extension is available, making it possible to install the TMJ in large boilers and allow the firedoor to be opened for flame inspection.

Also, the burner is to be furnished with a double extended cut-off valve, with a monel needle seating, directly in back of the dual atomizing nozzles. This arrangement, with the magnetic valve that is provided, insures instant and positive cut-off of oil on burner shutdown.

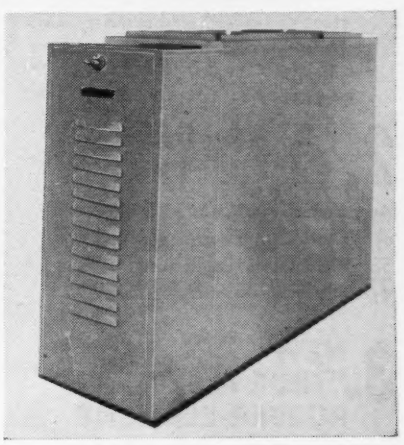
Made by: Electrol Burner Mfg. Co., Inc., 22 Union Ave., Rutherford, N. J.

Circle No. 3 on Card

Conn. State adds two Sizes of basement furnace Units

DESIGNED for basement installation a new furnace has been announced by Conn. State, in two sizes of heat exchangers developing capacities of 125,000 and 150,000 Btu/hr. The furnaces are made with oversize heat exchange tubes of welded heavy gauge steel. Cabinet dimensions are 46" high, 22" wide and 62" long, finished in gold enamel and red bands.

The unit's blower has pillow block



self-aligning bearings, easily accesible oil reservoirs and graphite bronze bushings to insure quietness and efficiency. Asbestos Reflectol insulation is used on both furnace sizes.

Made by: Conn. State Furnace Co., 340 Kossuth St., Bridgeport, Conn.

Circle No. 4 on Card

Red Seal Compact Meter for tank Trucks delivers 60 GPM.

THE 1½" NEPTUNE Red Seal type 4 compact meter is designed for higher delivery rates from small and medium tank trucks. It incorporates all accessories required for efficient metering; all it needs are inlet, outlet and vent connections. Heart of the meter is a Red Seal measuring chamber. It is specifically designed for maximum efficiency at any rate of flow between 12 and 60 gpm. The meter is of the

Let QUALITY Be Your Guide!

specify couplings by *Guardian*

and get these exclusive features . . .

1. "SILENT TENSION"*

Provides clearance for rapid assembly and snug fit, reducing wear. Extruded aluminum sleeve formed under closer tolerance obsoletes former production of steel sleeve with embossed splines.

*Patent applied for. There is only one "Silent Tension" splined sleeve coupling—Guardian makes it.

2. "DYNA-LINE" FABRICATION

An exclusive Guardian process aligns end-fittings and flex-element. Spins them into union while in a dynamic state—running true.

3. NEW "TRUE-FLEX" RUBBER ELEMENT

Special synthetic reinforced. Properly engineered to correct O.D. and durometer for maximum service life.

HANDY SERVICEMEN'S KIT

Meets 97% of service needs. Get one—keep it filled for extra profits on coupling replacements.

Insist on Guardian Quality . . . It is True Economy!

Write for Complete Data on Guardian Flexible Couplings and Guardian Oil Heat Valves.

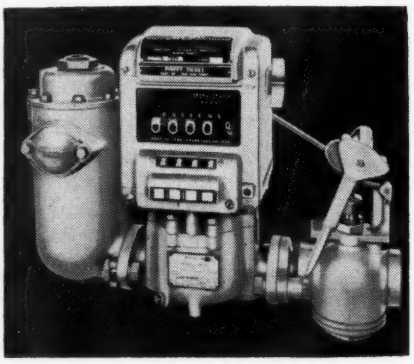
Guardian PRODUCTS CORP. VALVE DIVISION

Dept. F-72, 1231 East Second Street

Michigan City, Indiana

positive displacement, oscillating piston type, featuring a capillary type of seal, machined to hold accuracy without need for frequent re-calibration.

Four models of registers are available with this new meter. All have large reading numerals which can be



reset to zero after each delivery. Each model has a shuttered totalizer.

Neptune is also introducing a completely redesigned 2" Red Seal Compact Meter for tank trucks, rated at 20 to 100 gpm. It can be assembled in tank trucks for either right-hand, left-hand or angle flow to fit any piping and space conditions. It also is available with four register models.

Made by: Neptune Meter Co., 50 West 50th St., New York 20, N. Y.

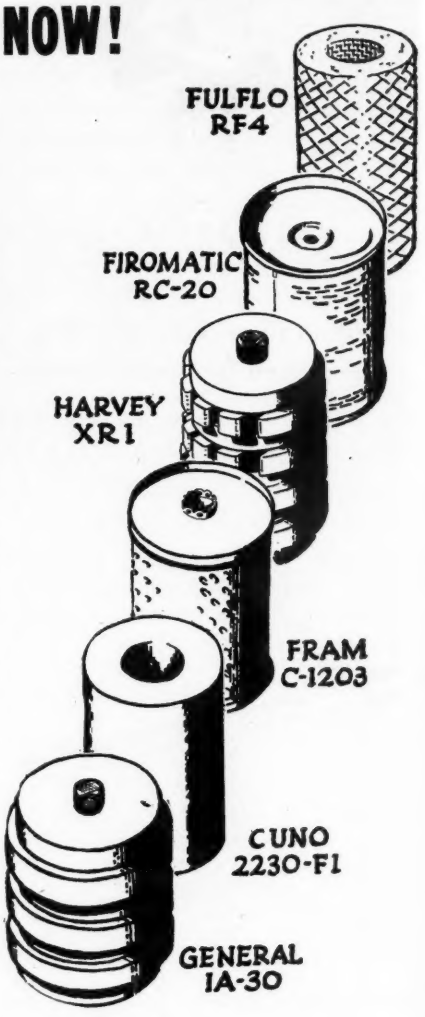
Circle No. 5 on Card

Corrosanti metal protective Treatment

CORROSANTI is a scientific preparation designed to protect ferrous metals from corrosion. It is manufactured in four grades, each designed for a specific application: Grade A is for boiler cleaning and maintenance; Grade B is for protection of ferrous surfaces exposed to atmospheric and aqueous deteriorating influences; Grade C is for protection of ferrous surfaces exposed to acid vapors, salt water and brine; Special for protecting surfaces subjected to temperatures of 900° F.

Grade A is designed to arrest and prevent rust, pitting and corrosion and prevent further adhering of boiler scale by penetrating old scale and breaking it off. It also seals boiler metal pores to deter any further scale accumulation. Grade B compound, suitable for water tanks, penetrates through rust formations and seals the metal pores

CHANGE FILTER ELEMENTS NOW!



The oil filter is a small but vitally important part of every clean up job. You can get just the one you need—or a practical assortment of 20 Popular Elements and Gaskets in the Harvey FILTER ELEMENT PACKAGE. It has 7 assorted Fulflo elements, 6 General, 2 Firomatic and one each of Delco, Esso-Gilbarco, Cuno, Fram and Harvey.

Better Buy the Package—

YOU save plenty, everytime you eliminate an unnecessary trip back to the shop, besides Package Price saves you 10%.

Package No. 126 Trade Price $13.80

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Sid Harvey stores in Boston: Bridgeport, Mt. Vernon, Hempstead, Valley Stream, Jamaica, Union City, New Brunswick, Newark, N. Philadelphia, W. Philadelphia, York, Baltimore, Washington, Arlington and Norfolk.

MAKE MONEY by the PACKAGE

The NEW Penn Round Boiler

Packaged Heat Unit

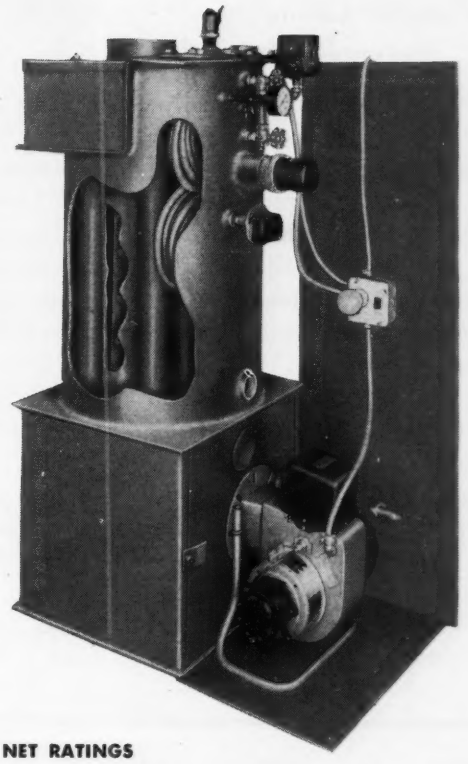
LOW-PRICED BOILER
ASME APPROVED
FOR FHA CONSTRUCTION

Go after those juicy FHA contracts with the Penn Round Boiler! Sell an *ASME approved* boiler . . . yet sell it at prices 15% to 20% below those asked for equivalent units. And—your price advantage holds whether you sell the Penn Round as a packaged unit or the boiler alone. Frankly, Penn has "starved" the Round Boiler price to fatten sales volume. You get full mark-up . . . don't lose a nickel of profit.

With the packaged unit, you also pocket savings on installation costs. The Penn Round Boiler Packaged Unit is delivered with burner, circulator and controls factory wired and completely mounted on the boiler. Coils for heating domestic hot water are built in and units are also available with built-in expansion tank.

In the Penn Round Boiler, replaceable tubes are completely submerged for tube protection and faster heat transfer. Steam chamber is positioned above top of tubes.

To get specifications and prices for both steam and hot water models, just mail the coupon now.



SBI NET RATINGS

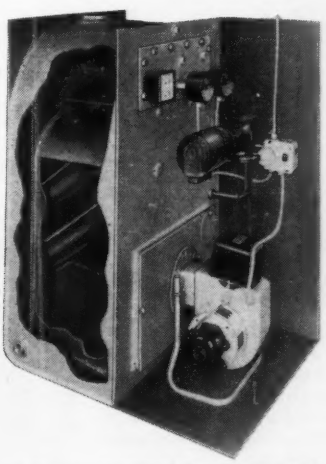
	RV-66	RV-76	RV-96	RV-132
Sq. Ft. Steam	275	320	400	550
Sq. Ft. Water	440	510	640	880
BTU	66,000	76,000	96,000	132,000

The NEW Pensteel

Packaged Heat Unit

This new "package" calls for fewer connections than any other unit on the market. Burner, circulator and controls factory-wired and completely mounted on the boiler. No foundation needed . . . basement engineering and assembly eliminated. Steam and hot water models available in 7 sizes ranging from 99,600 BTU's (gross) to 396,000 BTU's (gross).

Mail that coupon now—before you forget.



PENN BOILER & BURNER MANUFACTURING CORP.
Lancaster, Pennsylvania

Penn Boiler & Burner Mfg. Corp.
Department F, Lancaster, Pa.

Please send me free bulletin and prices on:

☐ Pensteel ☐ Round Boiler

Name .....
Firm Name .....
Address .....
.....

to prevent further corrosion. Corrosanti is a metal treatment, basically, and is composed of graphites, linseed oil and coal tar products.

Made by: Dr. Adolph Schror, 52 Cambridge St., East Orange, N. J.

Check No. 6 on Card

Wayne nozzle Adapter prevents "After-Drip"

A WAYNE no-drip nozzle adapter has been designed to bleed air from the line before oil is allowed to flow through the nozzle for insure positive oil cut-off. Action of the adapter is positive, with no moving parts, no adjustments or service required. The adapter is now standard equipment on all Wayne oilburners.

The company explains that when an oilburner is installed there is air present in the oil line between the fuel pump and nozzle when oil fills the nozzle orifice. Operating at 100 lbs. pressure the air compresses, but when the pump shuts off the air expands, pushing oil out of the nozzle under lowered pressure into the air tube or combustion chamber. The resultant smoking, sooting and carbon formation is what the nozzle adapter has been designed to eliminate.

Made by: Wayne Home Equipment Co., Inc., Fort Wayne, Ind.

Check No. 7 on Card

ASCO solenoid Shut-off with time delay Feature

A "MIDGET" ASCO solenoid valve has been announced, featuring a time delay mechanism that holds back the flow for 5½ secs. after the solenoid has been energized. This feature makes it particularly useful in oilburner applications. The valve has an ⅛" pipe connection and full 1/16" port for pressures up to 150 lbs., 15 gph flow. Also available with ⅛" pipe connection, full ⅛" port, pressures up to 125 lbs., 40 gph flow and time delay of 6½ secs. Construction uses brass or stainless steel body, stainless steel operating parts and a soft composition disc.

The time delay holds back oil flow until a full stream of air is flowing

through the burner. On stopping and re-lighting, then, the delay affords a purging period. Overall size, top to bottom, is 2-3/16". A similar 3-way valve with time delay is available.

Made by: Automatic Switch Co., 385 Lakeside Ave., Orange, N. J.

Circle No. 8 on Card

Instalvelope coupon Books for fueloil budget Accounts

A BUDGET-PAYMENT PACKAGE, Instalvelope payment coupon book, provides envelopes for all payments in a fueloil budget customer's contract.

Make This
Extra Profitable Sale
on Every Service Call!

Klemm FUEL OIL FILTER
Millions Since 1932

Almost every oil-fired heater, boiler or range needs a fuel oil filter for top performance. Assure your customer of heating comfort by installing a KLEMM Filter—the only filter with CHEMISTONE—*the original controlled porosity element.*

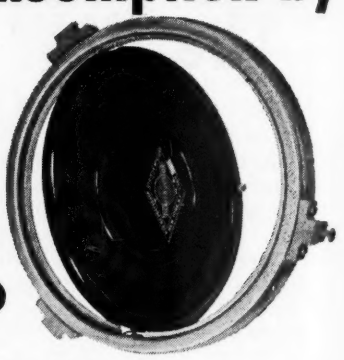
A big market—good profit
—repeat sales.

ORDER KLEMM FILTERS FROM YOUR JOBBER—*Today!*

Klemm
AUTOMOTIVE PRODUCTS CO.
1718 N. Damen Avenue • Chicago 47, Illinois
Mfd. in Can. by Elgee, Ltd. 410 Hopewell—Toronto
Export Div.: Guiterman Co., Inc. 35 S. Williams St., New York, N. Y.

Model 430-G

PREFERRED
DRAFT-A-JUSTORS
Cut Fuel Consumption by
10% TO 30%



The *Preferred* Draft-A-Justor is the original, patented Draft-A-Justor . . . improved to include the latest in engineering developments.

Stainless steel bearings and weather resistant metals provide long-life service without breakdown due to rust or wear . . . assure *continuous* fuel savings.

Millions now in satisfactory use.

WRITE FOR DESCRIPTIVE LITERATURE AND TRADE PRICES.

SIZES
Store, domestic and commercial sizes from 4" to 24" in diameter.
Industrial sizes from 2' x 2' to 5' x 12'.

PREFERRED UTILITIES MFG. CORP.
1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

A FEW OTHER BREESE BURNERS "1sts" SINCE THEN:

1924—First pot-type space heater

1925—First float control with vented stem

1926—First pot-type furnace burner with pilot and thermostatic control

1929—First all steel pot burner

1935—First to put in operation the millionth pot-type burner

1943—First burner pot to be "standardized" for military use

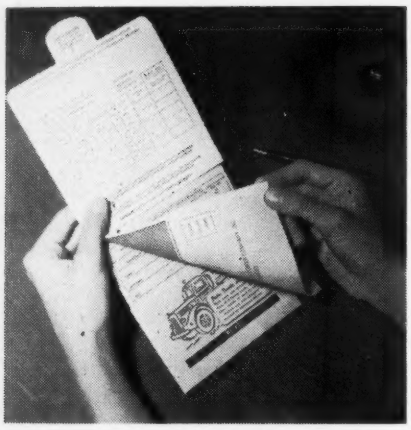
1952—First to offer a pot-type burner for space heaters and furnaces with flame temperatures comparable to power burners.

See them in operation at our Laboratory in Santa Fe or write for Bulletin 12-25.

BREESE BURNERS, INC.

P. O. BOX 1458 SANTA FE, N. M.

Each is printed with the dealer's return address, amount of monthly payment and the account number. The



inside cover of the book contains a space for the customer to keep a record of payments and the back cover of each envelope below the flap provides space for advertisements by the dealer which can vary according to his merchandising needs.

To make a payment, the customer enters the date, check number and amount on the inside cover, detaches an envelope, inserts the check, seals, stamps and mails. Besides this convenience, Instalvelope furnishes a constant reminder to make payments on time with addressed envelopes always available. A further advantage is described as a reduction in late payments, along with positive identification when the dealer receives the remittance.

Made by: Wassell Organization, Inc., Westport, Conn.

Circle No. 9 on Card

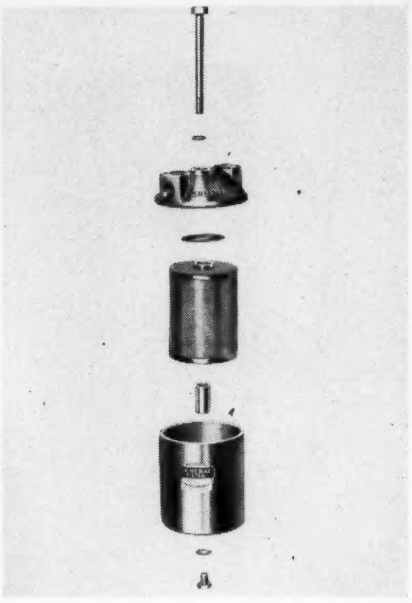
General Filter introduces model for heavy Fueloils

MODEL 2A-17 General Filter has been engineered for use with Nos. 4, 5 and 6 fueloils. The new model has a rating of 30 gph, with inlet and outlet openings tapped for ½" pipe threads. It is shown in the photo at right.

Installation is accomplished by making only two connections. Filter elements also can be cleaned quickly by removing a center bolt, lifting out the element and washing in solvent.

Made by: General Filters, Inc., 12890 Westwood, Detroit 23, Mich.

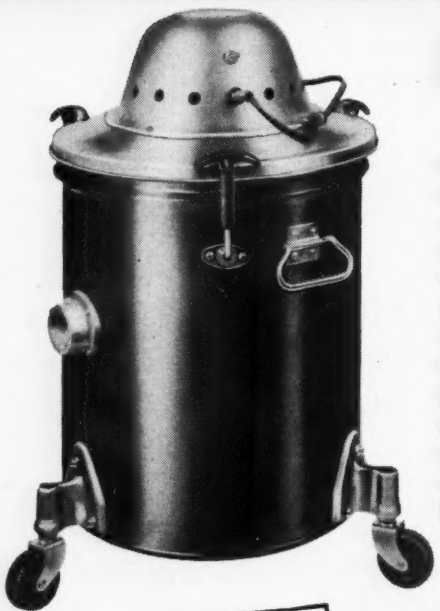
Circle No. 10 on Card



Harvey-Whipple BLC-300 Boiler for small Homes

HARVEY-WHIPPLE'S BLC-300 boiler, especially designed for small homes, is rated at 300 sq. ft. of steam or 480 sq. ft. of hot water and comes equipped with a Master Kraft flange-mounted oilburner. Boiler construc-

New! Revolutionary NU-VAC© Furnace Cleaner



Earns Extra Profits For You!

NU-VAC's new, revolutionary principles mean clean, fast, easy operation . . . and that means extra profits for you.

NO DUST BAG TO EMPTY—NU-VAC uses disposable paper filter bag that cannot clog suction. Bag is inside can, above dirt, while in operation. Dirt is bagged when can is turned upside down, after use.

DOUBLE PROTECTION—Outer cloth bag reinforced with wire frame surrounds paper bag. Costly bag blowouts impossible. No stopping to clean bag.

HOLDS ¾ BUSHEL DIRT.

QUIET—No objectionable noisy whirr.

SUPER-SUCTION—5/7 H.P. Universal ball bearing motor with two-stage turbine fan gives 56" water lift.

LIGHTWEIGHT, REALLY MOBILE—Only 25 lbs. to roll or carry into cellars. Not 70 lbs.

FINISH—Blue Hammertone.

$99.50 **Complete Price With Standard Equipment**
includes . . . One 10 ft. Heavy Duty Hose—One 30" Crevice Tool—One Bag Cage with Filter Bag—One Paper Filter with Draw String

DEALERS NOTE—Several choice territories available. Write today for complete information.

Manufactured by
EMPIRE CHEMICAL PRODUCTS CO.
10 Longworth Street, Newark 2, N. J.

HOME HEATING
AND COOLING
WHAT DID YOU PAY?
AUTHENTIC!
We have the records to prove our statements.
ONLY $124.74
ONLY... GENERAL ELECTRIC
AUTOMATIC OIL HEATING EQUIPMENT
Can Give You Such a Big Saving!
PETROLEUM SERVICE COMPANY
WHAT DID YOU PAY?
Residence at Westonia Lane Woodland Manor Hoxsie
Builder: E. Leslie Archibald, Sr.
6 Large Rooms and Bath
One of many homes using General Electric Automatic Oil Heating equipment at Woodland Manor
Only... $126.38
Was Spent... to heat and supply domestic hot water for this home during the past 12 months
GENERAL ELECTRIC
AUTOMATIC OIL HEATING EQUIPMENT
PETROLEUM SERVICE COMPANY
Service is Our Middle Name
271 FOX POINT BLVD.
Union 1-5800
MAIL THIS COUPON TODAY
Please send me information about a "G-E" Heati
NAME
ADDRESS
CITY
WHAT DID YOU PAY?
AUTHENTIC!
We have the records to prove our statements.
ONLY $133.68
ONLY... GENERAL ELECTRIC
AUTOMATIC OIL HEATING EQUIPMENT
Can Give You Such a Big Saving!
PETROLEUM SERVICE COMPANY

CASE-HISTORY NEWSPAPER ADS like these are making sales records in Providence, R. I., and other towns all over the country. The *proven fuel economy* of G-E Oil Furnaces and Boilers is a compelling story to homeowners.

"We do more business by cutting customers' fuel bills with G-E Heat"

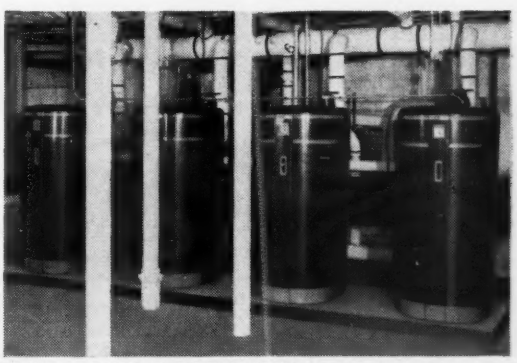
—Morris Lazarus, General Manager, Petroleum Service Co., Providence, R. I.

"When we tell the G-E story to a prospect, we can usually sell him. Low oil consumption means a satisfied customer and a satisfied customer stays a customer. We now sell many, many more G-E Units than we formerly could with other lines because of the proved fuel savings. Our oil gallonage has continually increased for these reasons."

A G-E *LEADERSHIP FRANCHISE* PUTS YOU AHEAD

- **IN PRODUCTS:** Unique *Air-Wall* System; G-E packaged home cooling; G-E "quick-comfort" fuel-thrifty gas and oil boilers and furnaces—outstanding quality at a fair price.
- **IN CONSUMER PREFERENCE:** Surveys prove the General-Electric name enjoys tremendous public acceptance.
- **IN ADVERTISING:** Powerful national advertising aimed at consumers and builders, timely action-packed sales programs.
- **IN ORGANIZATION:** Experienced engineering, sales, and service help, and continuous, up-to-date training programs.

A G-E *Leadership Franchise* is a lasting business asset. Write us today—there may be an opening in your area.



ADDED SALES OPPORTUNITIES for G-E dealers are found in multiple installations of G-E Oil Boilers. Mr. Lazarus states "Very low fuel consumption gives G-E the edge over big, bulky units in selling to apartments, stores, schools, churches, and industrial plants."

General Electric Company, Section FO-19,
Air Conditioning Division, Bloomfield, New Jersey

Please tell me more about my business opportunities with a G-E *Leadership Franchise*.

Name.....

Company.....

Address.....

City.....Zone.....State.....

GENERAL ELECTRIC

fueloil & oilheat

tion features extra-heavy gauge vertical fire tubes, headers and shell of high grade firebox steel. Reflective foil-backed insulation is used.

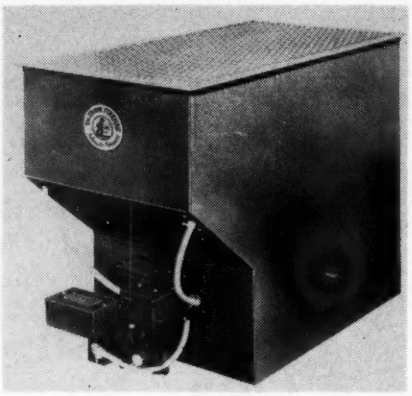
Either flush or extended jackets are available and each boiler is equipped with built in 200 gph tankless hot water heaters, reversible for steam or hot water operation. BLC-300 has easily removable gas retarder baffles and split top for easy cleaning of tubes and boiler interior.

Made by: Harvey-Whipple, Inc., Springfield, Mass.

Circle No. 11 on Card

Iron Fireman introduces Line of wall and floor Furnaces

A NEW LINE of vaporizing oilburner wall and floor furnaces produced by Iron Fireman will provide fully automatic heating for the small house. One of the features of the new group is an electric ignition system. This "Igniter" provides easy control over combustion without the need for a pilot light. Burners operate only as heat is required. Floor and wall



furnaces equipped with the "Igniter" come in models suitable for shallow pit, basement, or in-the-wall installations.

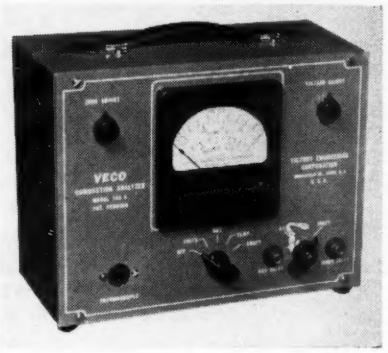
All have Iron Fireman's forced draft "Channel Flame" retort. Motors have permanently lubricated bearings and castings are of rustless aluminum. Capacities of the new models range from 50,000 to 85,000 Btu. Furnaces have provision for cold air return; some may be installed with ducts to carry warm air to remote rooms or to second floors. Most models have forced air circulation. Conversion burners, also equipped with electric igniter, are included in the line.

Made by: Iron Fireman Mfg. Co., 3170 West 106th St., Cleveland 11, Ohio.

Circle No. 12 on Card

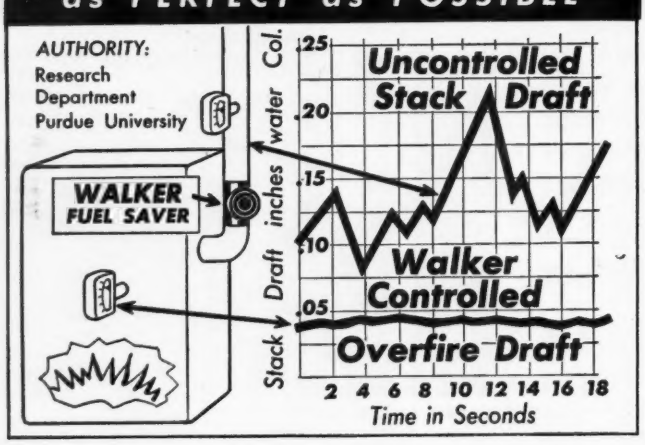
Victory Engineering announces model 140-A combustion Tester

VECO MODEL 140-A complete combustion tester simultaneously indicates temperature of flue gas, draft over fire and CO_2 content of flue gas. Fea-



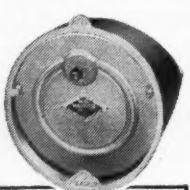
tures include a glass-coated electronic thermistor; gas analysis cell with built-in temperature compensator, using 1/10 dry cell battery current re-

Here's DRAFT CONTROL
PERFORMANCE
as PERFECT as POSSIBLE



ATTAINED BY FAMOUS WALKER FUEL SAVER

This chart, based on impartial university research, shows how perfectly a Walker Fuel-Saver performs. Sound engineering... patented super-sensitive rolling contact hinge... high quality materials... expert craftsmanship assure a long life of trouble-free automatic control. There's a Walker model for every conventional heating purpose. Write for catalog.



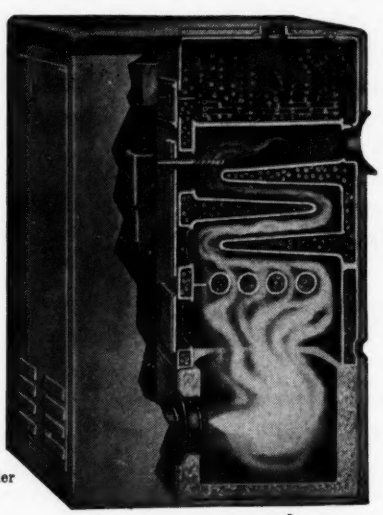
NEW Type 34C— Domestic...for furnaces ...boilers...winter air-conditioners — stoker and oil fired.

WALKER FUEL-SAVER AUTOMATIC DRAFT REGULATOR

WALKER MANUFACTURING & SALES CORP.
1758 Penn St. St. Joseph, Missouri

Steel HEATING UNIT

5 YEAR GUARANTEE AGAINST LEAKS

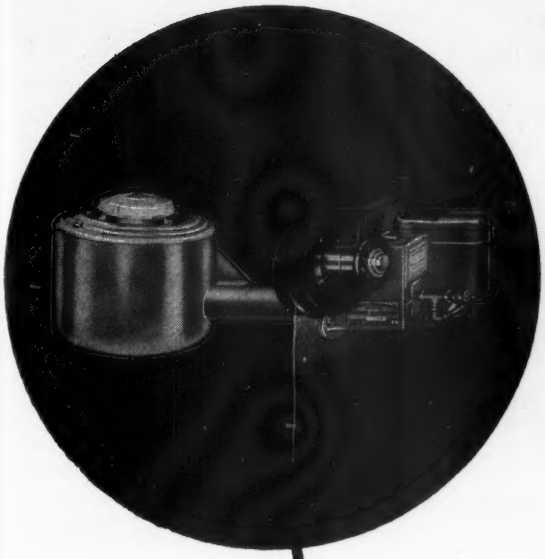


Licensed under U. S. Pat.

Write for full particulars about Exclusive Franchise for your territory on our full line of MAGIC-HEAT Boilers and Boiler-Burner Units.

Magic-HEAT

Product of MARIETTA METAL PRODUCTS CORPORATION
MARIETTA, PENNA.



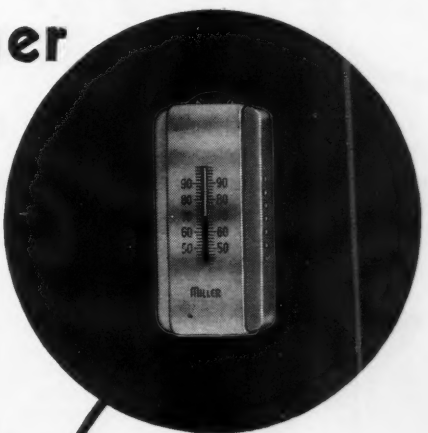
Boiler and Furnace Manufacturers Considering Low Input Oil Fired Units

The combination for quiet, non-pulsating low input oil firing of small homes

To give you competitive advantages in the small-home heating field—to give your dealers something they can really talk about and sell. Something to meet the small home owner's demand for ECONOMY and EFFICIENCY — THE MILLER FLANGE-MOUNTED VAPORIZING OIL-BURNER WITH MILLER CONTROLS.

Designed exclusively for small homes, two sizes—input range of .6 to .9 gph. It is precision-built, quality-controlled, factory tested, field proven. Clean-burning. Quiet operation. Variable flame shape for best efficiency. Fixed high fire and pilot—Fixed air setting—No field adjustments required. A constant-level valve with automatic safety —no manual reset. A room thermostat that gives very close temperature control. Tailored to individual furnace design, packaged ready for use.

miller oil burner
and controls for small home heating



MEMBER OHI OIL-HEAT INSTITUTE OF AMERICA

MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION INDOOR COMFORT

THE miller COMPANY

SINCE 1844

HEATING PRODUCTS DIVISION, MERIDEN, CONNECTICUT

ILLUMINATING DIVISION: Fluorescent, Incandescent, Mercury Lighting Equipment
HEATING PRODUCTS DIVISION: Domestic Oil Burners and Liquid Fuel Devices
ROLLING MILL DIVISION: Phosphor Bronze and Brass in Sheets, Strips and Rolls

fueloil & oilheat

quired by other cells; filter-drier, requiring only 6 to 8 squeezes of hand aspirator; vibration and shockproof.

To make a combustion test, one of the instruments' two probes is inserted in a small hole in the flue to measure CO_2 and stack temperature and the other is passed through the firebox door to measure draft over the fire so that an entire series of readings can be taken without moving the probes. A built-in thermocouple insures flue gas temperatures being taken at the same point as CO_2 measurement.

Made by: Victory Engineering Corp., Springfield Road, Union, N. J.

Circle No. 13 on Card

No. 46 Thrush relief Valve permanently set for 30 lbs.

NO. 46 THRUSH safety relief valve has been designed primarily as a water relief valve to serve double duty of relieving water as well as steam if critically high temperatures occur in a hot water heating system. Built to conform with the ASME Code, the valve carries a rated output of 283,500 Btu, based on steam capacity discharge.

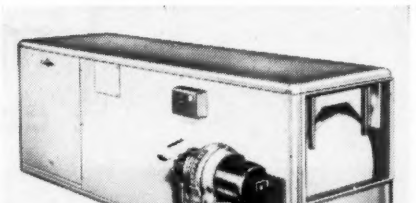
Materials with which the No. 46 is made are capable of withstanding high temperatures, including steam, and include a specially designed metal diaphragm for long life and greater protection. Factory set at a non-adjustable 30 lbs. pressure, the valve has ¾" inlet, 1" outlet, testing lever and large readable nameplate.

Made by: H. A. Thrush & Co., Peru, Ind.

Circle No. 14 on Card

Horizontal furnace Unit is announced by Mueller

TYPE 253 Mueller oilfired furnace unit may be installed as a suspended winter air conditioner or unit heater for commercial applications or set on joists, hung from attic rafters, installed in basements, crawl spaces or closets for home heating. Available



now in only one size, 110,000 Btu/hr. input, the units eventually will be offered with inputs up to 225,000 Btu/hr. Type 253's large, multi-blade centrifugal blower operates at low speeds, with the blower assembly completely installed and tested before shipment. Unit features heavy gauge welded steel heat exchanger, easily cleaned, and cleanout patches for access to the interior of the radiator.

Flue outlet at the back of the unit permits close-to-ceiling installation. Either of two pressure atomizing Mueller burners can be furnished with the units. They are equipped with a burner observation port, which doubles as a pressure relief door. Steel casings are finished in aluminum.

Made by: L. J. Mueller Furnace Co., 2005 West Oklahoma Ave., Milwaukee 15, Wis.

Circle No. 15 on Card

UP TO 58½% lighter

THAN COMPARABLE COUPLINGS!

New Flexiflange Flexible Couplings — Specially Designed for Tank-Truck Use

Because the emphasis over the past few years has been on *faster unloading*, truck and trailer truck operators have been moving to large size piping. There has been one important drawback, however, to this trend. Leakproof, flexible couplings to fit the larger pipe have always been available—but they are designed primarily for use in bulk plants and refineries. This means they are much heavier than need be.

Now Philadelphia Valve Co. has solved the problem with its new line of Flexiflange Flexible Couplings. Made of malleable iron, they are engineered specifically for use in truck and trailer tanks. They're designed for 100 psi with a liberal safety factor—far stronger than necessary for tank-truck service—yet in most cases they offer a weight saving of up to 58½ percent!

Flexiflange Couplings fit into the same grooves as any standard couplings. The seals, too, are interchangeable with other standard makes. They are available in all sizes from 1" to 6". Pipe sleeve adapters can also be furnished.

To get peak efficiency with up to 58½ percent saving in weight, be sure to specify Flexiflange Couplings by Philadelphia Valve. Write for complete information and prices.

PHILADELPHIA VALVE COMPANY

3413 Aramingo Avenue, Philadelphia 34, Pa.

Pacific Coast Distributors:

Oil Marketing Equipment Co., 325 Fremont Street, San Francisco 5, Calif. • Howard Supply Co., 5125 Santa Fe Avenue, Los Angeles 11, Calif.

New Turb-O-Tube Furnace is CounterFlo Model

A COUNTERFLO UNIT, announced by Turb-O-Tube, is a small furnace, measuring 20" x 20" x 58", that occupies 2.75 sq. ft. of floor area and designed for the one story, basementless home. Maximum output is 70,000 Btu/hr. at the bonnet.

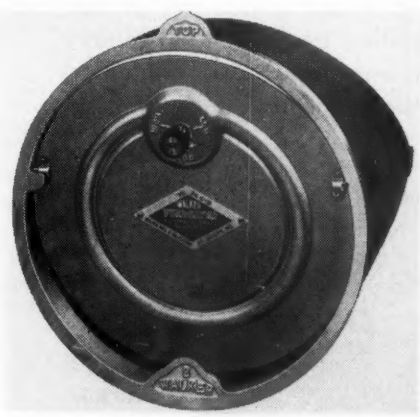
Features, besides its small size, are: Single location of the combination control, resulting in quicker response to temperature changes; rapid temperature rise to insure full heat within minutes. Controls, burner and stack are located at the front of the furnace to allow installation in alcoves and recessed areas.

Made by: Turb-O-Tube Furnace, Inc., 204 Rhode Island St., Buffalo 8, N. Y.

Circle No. 16 on Card

Walker 34-C is domestic, automatic draft Regulator

TYPE 34C-DOMESTIC automatic draft regulator, latest in the Walker line, has been engineered for a wide range of applications to central heating plants for maintenance of positive and accurate control over stack range of drafts. Adjustment is indicated by a pointer and dial for high, low and medium.

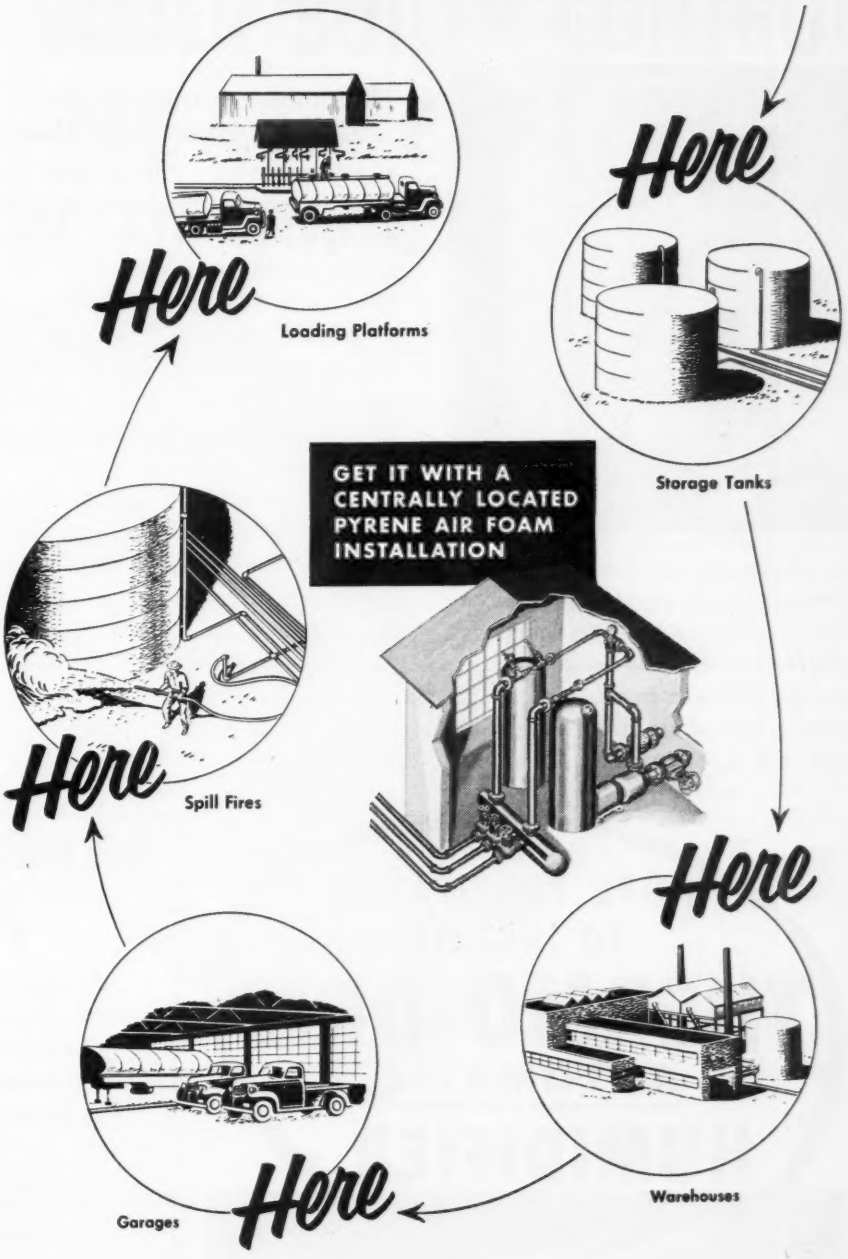


Construction of the 34C features super-sensitive chrome pivots mounted on the front of the plate out of corrosive area, rigid cast aluminum frame and swinging vane of aluminum-coated steel for maximum resistance to heat and corrosion.

Made by: Walker Mfg. & Sales Corp., 1757 Penn St., St. Joseph, Mo.

Circle No. 17 on Card

YOU NEED PYRENE AIR FOAM PROTECTION



A Pyrene* installation enables you to instantly feed large quantities of air foam to any predetermined point. Pipelines run from centrally located proportioning tanks to all your fixed fire hazards, such as storage tanks, as well as to hose stations. Simply by turning the proper valve, one man can quickly start producing the air foam either at stationary foam makers or portable foam nozzles. Protect your investment this easy way. Write for name of nearest Pyrene jobber today.

**T.M. Reg. U.S. Pat. Off.*

Pyrene AIR FOAM

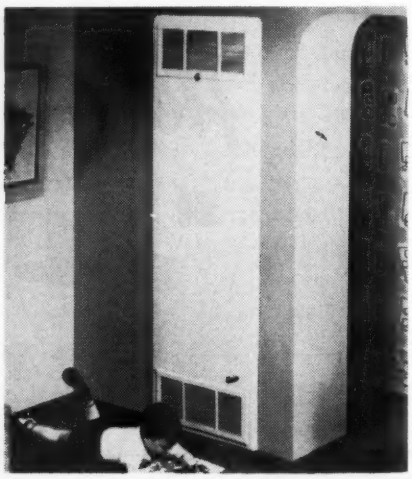
PYRENE MANUFACTURING COMPANY

695 Belmont Ave. Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

Kresky announces oilburning forced air dual wall Furnace

A LOW-COST CENTRAL HEATING PLANT with an output of 57,500 Btu/hr, adaptable for houses with slab floors or low foundations, has been put on



the market by the Kresky Mfg. Co. Continuous air circulation is accomplished by means of a high-volume fan coupled to a variable speed automatic control. With this combination, a large volume flow of air at a low temperature rise is maintained, eliminating drafts, hot zones and cold floors. Exterior panels are cool because the large volume of air passing through the furnace is an efficient insulator.

Made by: Kresky Mfg. Co., Petaluma, Calif.

Circle No. 18 on Card

Thermobloc introduces large Capacity direct-fired Heater

A THERMOBLOC, direct-fired unit heater, capable of producing 2 million Btu/hr. has been announced, designed for large industrial applications to heat areas from 16,000 to 24,000 sq. ft. This model, the 2,000, has twin heat exchangers in the form of a "V" for maximum scrubbing of the heating surfaces. Discharge diffusers give pinpoint control of air throw and may be rotated a full 360 degrees. Ducts may also be run from any outlet to adjoining rooms, if heat is needed there or the unit can be used as a central heating plant. In that case, a plenum chamber is supplied to replace the four diffusers.

Normal air output is 22,000 cfm; air intake velocity is 440 fpm, with a 10 hp motor powering the fan. Either light fueloil, with a pressure atomizing oilburner, heavy fueloil, with a horizontal rotary cup burner or gas, with a power burner, can be employed. The Model 2,000, which requires a minimum amount of floor space and head room, also can be equipped with a combination gas-oilburner.

Made by: Prat-Daniel Corp., 2 Meadow St., South Norwalk, Conn.

Circle No. 19 on Card

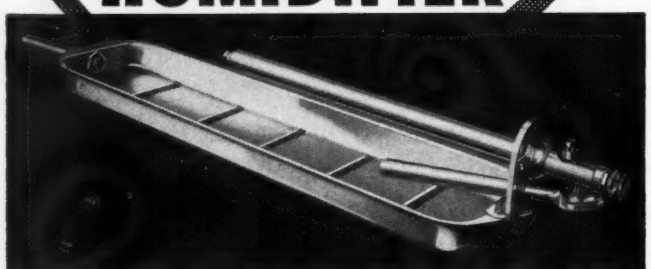
Rockwell Mfg. Co. has new bulk plant Meter

A BULK PLANT METER, the Rotocycle 6 BLX, has been developed by Rockwell Mfg. Co. This 6" rotary, positive displacement meter may be used on loading racks for measurement of refined petroleum and other operations.

The 6 BLX meter weighs only 207 pounds. The new meter is designed for continuous operation at working pressures up to 125 psi and flow rates up to 650 gpm. The 6 BLX can be mounted in a straight pipeline by em-

MORE PROFITABLE TO INSTALL

THERMO-DRIP AUTOMATIC HUMIDIFIER



- VALVES DON'T LIME UP
- NO STAGNANT POOL TO REHEAT
- SUPER-SENSITIVE THERMOSTAT
- OUTSIDE SCREW ADJUSTER
- EASY INSTALLATION
- ONE KIT TO PURCHASE

Our volume sales prove it... Thermo-Drip gives furnace owners greater customer satisfacton.

Prospects easily see the advantages of humidifying by automatically dropping water on a sizzling hot stainless steel pan.

Too, it's easy to demonstrate why this method is the *most efficient, most dependable* way to put moisture in the air.

Yes—Thermo-Drip gives *faster, most efficient vaporization.*

Write today for FREE literature. Dept. FO-72

AUTOMATIC HUMIDIFIER COMPANY • Cedar Falls, Iowa

DEPENDABLE PERFORMANCE

An Acme Electric transformer equipped oil burner, is visual assurance of dependable ignition performance. Heavy duty design, impregnated coils, sealed in heat dissipating compound.

ACME ELECTRIC CORPORATION

507 WATER ST. CUBA, N. Y.

Acme ACME Electric

TRANSFORMERS

FAST ACTION

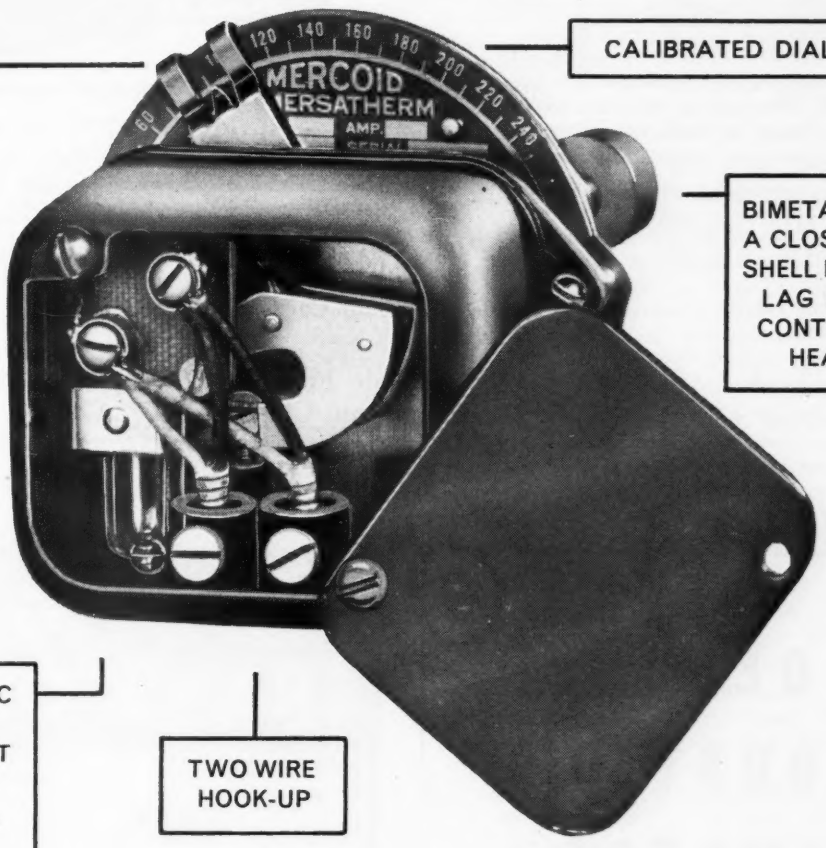
MERCOID HOT WATER BOILER CONTROL

COMPACT—NEAT—EFFICIENT

LOW IN PRICE

OUTSIDE LEVER ADJUSTMENT NO TOOLS REQUIRED

CALIBRATED DIAL



BIMETAL COIL SEALED IN A CLOSE FITTING COPPER SHELL ELIMINATES USUAL LAG FOUND IN OTHER CONTROLS EMPLOYING HEAVIER BIMETAL

MERCOID MAGNETIC TYPE SEALED MERCURY CONTACT UNAFFECTED BY DUST, DIRT, LINT, MOISTURE, ETC.

TWO WIRE HOOK-UP

Use the Mercoid Immersatherm with steam, vapor and hot water systems employing indirect domestic hot water heaters.

Due to the rapid heat transfer through the copper shell, and to the small mass of the bimetal employed, the Immersatherm instantly follows changes in boiler water temperature and provides positive and accurate control. By eliminating the usual lag found in controls employing heavy bimetal or immersion wells, the boiler water can be held at a higher temperature without overshooting or producing steam.

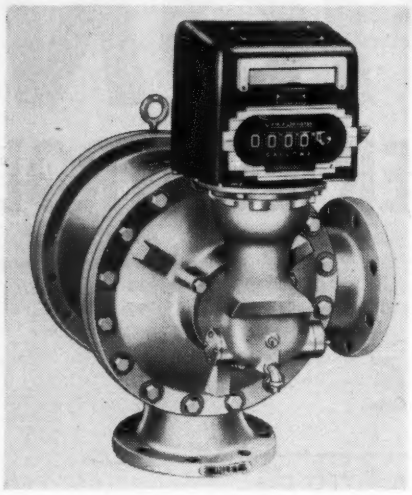
The instrument swings in a 4″ circle and the mounting stem 2½″ long permits passing through boiler insulation.

Type 115W (Low Voltage 9/10 Amp.,—24 Volts. Circuit opens on temperature rise.
Type 115W-3 (Low Voltage 9/10 Amp.,—24 Volts. Circuit closes on temperature rise.

LIST PRICE: Each $9.85 (Range 50-250°F.)

THE MERCOID CORPORATION, 4233 WEST BELMONT AVE., CHICAGO 41, ILL.

NEW YORK, N. Y., 205 East 42nd Street **PHILADELPHIA, PA., 3137 N. Broad Street**



ploying two 45-degree ells.

This new Rockwell meter is available with non-reset, small reset, large reset and ticket printing registers.

Made by: Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa.

Circle No. 20 on Card

Mor-Flo hot water Tank incorporates stone Lining

MOR-FLO stone-lined hot water tank has been designed for residential use. The seamless tank, made of heavy-gauge steel, has a capacity of 33 gals. and delivers from 28 to 60 gals. of hot water per hour, governed by the size of the heater to which it is attached.

The interior of the tank has a lining of ½" thick composition stone, which serves as protection from rust and corrosion and also insulates to conserve water and fuel.

Made by: Mor-Flo Heater Corp., 2176 East 76th St., Cleveland 3, Ohio.

Circle No. 21 on Card

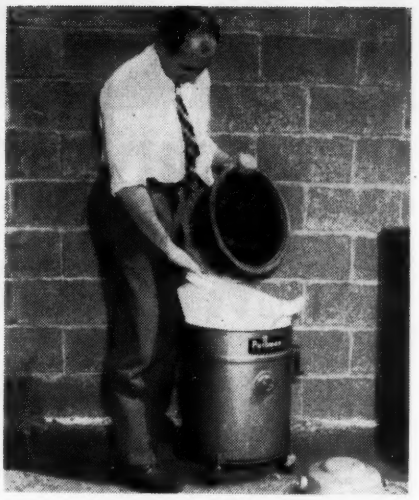
Six inch plastic Ruler offered by Gorton Heating

A SIX-INCH PLASTIC RULER, on the back of which are the actual sizes of air outlets of Gorton Valves, is being distributed to dealers by the Gorton Heating Corp., Cranford, N. J.

Circle No. 22 on Card

Pullman disposable Filter for its vacuum Cleaners

PULLMAN is using a disposable paper filter for its furnace vacuum cleaner,



designed especially to prevent clogging on very wet jobs. With the filter in place there is less tendency for soot to stick than with fabric type filters, the company explains.

Also, after extended use acid formed in the soot eats its way through the fabric bag, but with the disposable paper filter no soot reaches the bag itself and prevents bag breaks.

Made by: Pullman Sales Corp., 31-39 Allerton St., Boston 19, Mass.

Circle No. 23 on Card

GEM
COMBUSTION
CHAMBERS

•

The Gem Clay Forming Company

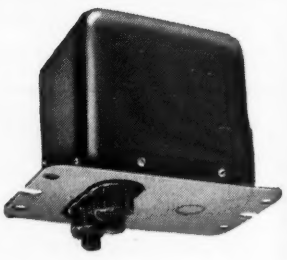
SEBRING, OHIO

Established 1907

Telephone: SEbring 8-6141

DONGAN TRANSFORMERS

THEY HAVE STOOD THE TEST OF YEARS



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THE best testimonial to the dependability of Dongan Transformers is that they have for years been standard equipment on leading makes of oilburners. Acquaint yourself now with the Dongan's many outstanding features.

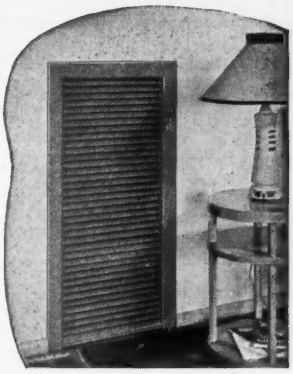
•

Voltages from 5,000 to 20,000.
A variety of sizes and mountings

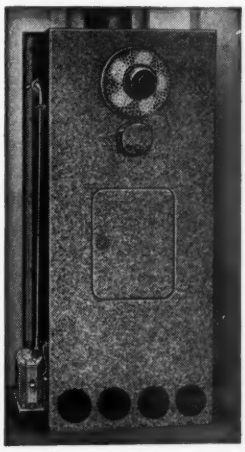
WRITE FOR Literature

Dongan Electric Manufacturing Co.
2981 Franklin Detroit 7, Mich.
"The Dongan Line Since 1909"

CASH IN ON THE SMALL HOME BUILDERS MARKET WITH



Silent Sioux



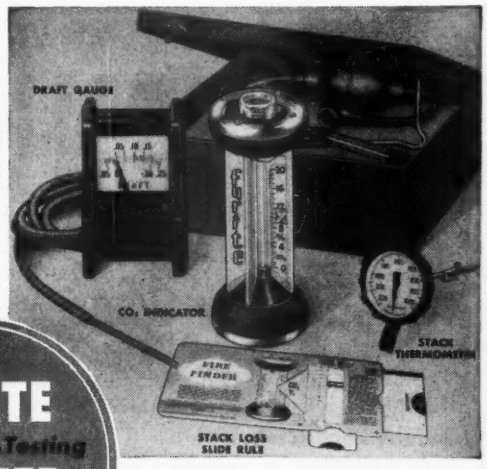
in the wall Oil Furnace

An ideal heating system for small and medium sized basementless homes. Thermostatically controlled forced circulation . . . 44,600 BTU/hr. Requires simple installation in utility room or alcove . . . all controls and access doors readily accessible. Easier to install and service than a floor furnace. For greater sales, stock up with Silent Sioux, write to:

Silent Sioux Corporation

Formerly Silent Sioux Oil Burner Corp.

Dept. FO-752 Orange City, Iowa



The **FYRITE** Combustion-Testing **MASTER KIT**

Helps You Build Profits and Prestige

Combustion-testing builds business in two ways. First, it boosts service profits because with instruments any service job can be done in less time and by less experienced men. Second, it brings in new equipment business by spotting fuel-wasting burners through a dramatic "fuel-saving" check-up which will convince even the most skeptical customer of the need for replacement or modernization.

Keying your sales and service to fuel conservation will work wonders for you. It will establish you as a "fuel-saving" expert and help you corner an even larger share of immediate and future sales in your community.

The MASTER KIT shown above will appeal particularly to those who want professional implements of highest quality and reliability, as well as of impressive display. The cost of the kit is very small compared to the sales and service profits it will bring you.

Ask your Jobber or Write for Bulletin 733

BACHARACH Industrial Instrument Co.

7000 BENNETT STREET • • PITTSBURGH 8, PA.

ELIMINATE "PULSATING" PUFFING, SOOTING IN OIL-FIRED HEATING PLANTS WITH quickdraft

Draft is merely heated air rising up the chimney to create a negative pull over the fire. When heat is first called for, however, the chimney is usually cold and the heated air, striking the cold flue walls, is cooled and loses its buoyancy. Even if the chimney is perfect, considerable time elapses before it is heated and full draft established.

Without full draft, sufficient oxygen to support full combustion is not drawn into the fire. Resulting unburned oil vapors are wasted in the chimney, escape into the house causing objectionable odors and film or collect in the firebox causing puffing. Insufficient oxygen also results in intermittent burning or pulsating, accompanied by loud hammering. Until full draft is established, unburned carbon particles are not carried away but precipitate in radiators, smoke-pipe and chimney as soot.

quickdraft corrects this condition by creating full draft the instant firing begins, insuring an adequate supply of oxygen for complete combustion and carrying all combustion products up the chimney. Controlled by the thermostat, ***quickdraft*** operates as long as the fire is burning yet does not "build up" the draft when natural draft is functioning normally. It is especially effective where chimneys are poorly constructed or where bends or elbows in chimney or smoke-pipe retard natural draft.

quickdraft is reasonably priced, quickly and easily installed, uses no more current than a small light bulb. It is simple, fool-proof, durable . . . vitreous enamel units will not rust or wear out. *Does not restrict smoke-pipe opening, even in event of current failure.*

Use ***quickdraft*** to correct draft problems caused by low, defective and inefficient chimneys. Figure it in new installations and conversions, too, to *insure* satisfaction. Write for bulletin.

quickdraft COMPANY

DIVISION OF THE HALL'S SAFE COMPANY, INC.

809-C 10th Street, N. E.

CANTON 4, OHIO

Patent Applied For

Ask about quickdraft advantages on coal and gas heating units.

B. K. Breed has returned to Underwriters' Laboratories, Inc., as associate engineer, Gases and Oils Department. Breed first joined Underwriters' in 1924. In 1928 he left and became associated with Preferred Utilities in New York as architects and engineers' contact man on specification and sale of commercial and industrial oilburners. Later Breed was named design engineer for the company.

E. J. Hoppe has been appointed sales representative for the International Heater Co., Utica 2, N Y. He will handle the complete International Economy line of boilers and furnaces in Eastern Ohio, Western Pennsylvania and West Virginia. Hoppe was formerly sales manager, Keokuk Gas Service Co. (Ohio.) Prior to that he was plant manager, Joliet Gas Meter Repair Plant.

C. A. Gifford has been named assistant manager, Buffalo sales office, American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa. A salesman prior to his advancement, Gifford joined American-Standard in 1928 and has been a member of the Buffalo sales staff since that time.

Bert Watling has been appointed sales manager, Carlin Co., Wethersfield, Conn. Watling was formerly sales manager, Silent Glow Oil Burner Corp. and was also associated with the Iron Fireman Corp. as New England District sales manager.

I. E. Killian has been appointed manager of Liquefied Petroleum Gas sales, Esso Standard Oil Co., N. Y. 19, N. Y., succeeding C. A. Breen who has resigned from the company. Killian was formerly LPG sales manager for the company's North Carolina Division. Killian has been with Esso for 20 years holding various sales responsibilities.

D. A. Purviance, recently general sales manager, now is general manager and *R. D. Hall,* formerly assistant sales manager, was promoted to general sales manager, by Majestic Co., Huntington, Ind.

Reminiscences

(*Begins on page* 47)

"No, B, you better keep on selling —and we fellows keep on trying to make good on it, somehow. Once the job is sold, I might have to tell the Captain that the draft is shy, but there would be no trouble lengthening that stack, or do whatever other little thing needed to be done."

Sometimes we'd make good easily, sometimes it would take a leg, and sometimes we'd fail. And we'd be learning all the time.

And do you know what? I almost think it was more fun.

HAN A. KUNITZ

❖

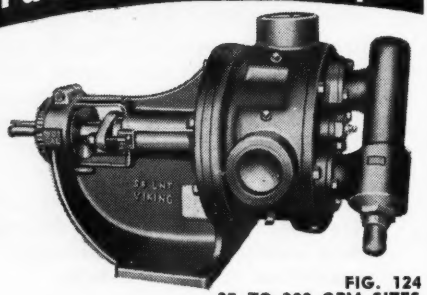
UNITED STATES DEPARTMENT OF THE INTERIOR

Oil & Gas Division, Washington

Editor:

It is difficult to believe that anyone could have started a "fueloil magazine" as early as 1922. Fueloil burning really only got started in the early twenties when Mexican oil was shipped in to the East Coast. (*Cont.*)

IF IT'S SERVICE YOU WANT!
Specify...
VIKING Truck Mounting Pumps



For rugged, year-in and year-out truck pump service, check the features of the Fig. 124 Viking pump.

FIG. 124
35 TO 300 GPM SIZES

1. **Integral thrust bearing — controls distortion and end play.**
2. **Extra long stuffing box — leak resistant.**
3. **Revolvable casing for handy port location.**
4. **Double supported relief valve on head.**
5. **Pump operates equally well in either direction.**
6. **Positive, *fast* self-priming. No pulsation.**

"Building and advertising pumps for the fuel oil industry since the first issue of this magazine in 1922."

Write today for latest free bulletin 1507EE. Sent promptly on request.

VIKING AN HONORED NAME IN PUMPING

See Our Catalog In SWEETS

Viking PUMP COMPANY Cedar Falls, Iowa

OIL TANKS
for
Basement or Underground

Price domestic fuel oil storage tanks are manufactured to Underwriters specifications and bear Underwriters labels.

Obround Basement (Vertical or Horizontal)			Round Underground		
Cap. in Gals.	Gauge	Size	Cap. in Gals.	Gauge	Size
275	14 or 12	27 x 44 x 60	285	12	38 x 60
220	14 or 12	27 x 44 x 48	550	12	46 x 76
235	14 or 12	22 x 44 x 60	1000	10	52 x 110
275	12	22 x 44 x 72			

Write Today for Catalog and Prices

PRICE
FIREPLACE HEATER & TANK div.
PRICE NATIONAL CORPORATION
152 W. Austin Street, Buffalo, N Y
237 Jackson Rd., Hatboro (Philadelphia), Pa

KEEP PLANT AND TRUCK COSTS DOWN

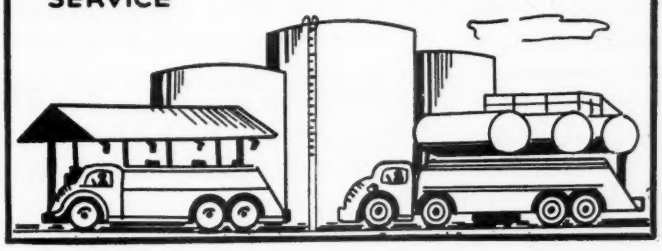
R & M men know the best equipment for every marketing need. Count on them to help you keep plant and truck operating costs to a minimum.

RENICK & MAHONEY, INC.

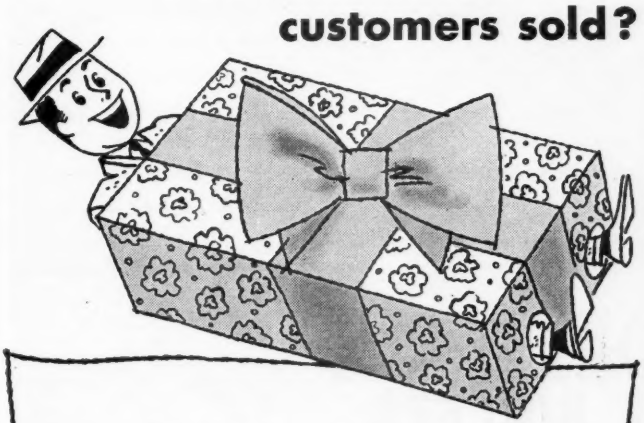
380 Second Avenue (at 22nd St.)
New York 10, N. Y.
Telephone ALgonquin 4-4202

R&M SERVICE

Complete Equipment for the Oil Trade



But what KEEPS customers sold?



It's one thing to sell a customer on oil heat. It's another thing to *keep* him sold. Here's the best way we know of doing it:

Keep burners in top repair, give the very best possible delivery service all the time, and supply the finest heating oil the industry offers.

It's the way Gulf dealers are keeping *their* customers sold on oil heat and constantly proving to them that there's nothing to equal Gulf Solar Heat fuel oil for complete home comfort.

GULF SOLAR HEAT

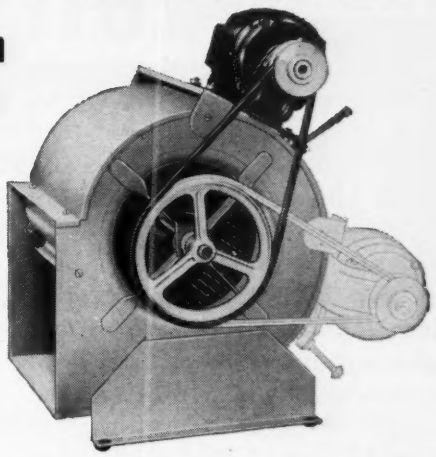
GULF OIL CORP. • GULF REFINING CO.

Brundage

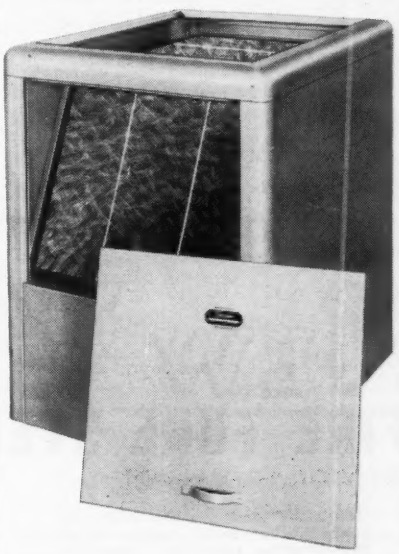
SERIES "X" BLOWER ASSEMBLIES

unequalled in performance efficiency quality

USED AS STANDARD EQUIPMENT BY MANY LEADING FURNACE BUILDERS



A standard type and size for every hi-boy, low-boy, counter-flow and horizontal furnace of 40,000 to 200,000 Btu/hr. rating at bonnet temperature rise up to 100°F. Designed and built for PEAK EFFICIENCY and DEPENDABLE PERFORMANCE. Has these unmatched features . . . Duo-multiblade wheel, statically and dynamically balanced . . . Heavy-gauge cold-rolled steel wheel for maximum efficiency . . . One-piece bridge-type motor mount . . . Self-aligning shock-resistant bearings . . . Four-point bearing suspension . . . One-piece bearing assembly.



BLOWER-FILTER UNITS

None better for any warm-air heating plant, or for cooling, ventilating and air-conditioning systems. You can depend on BRUNDAGE Quality and Performance . . . Customer satisfaction . . . MORE PROFIT!

SOUND ENGINEERING AND QUALITY ARE BRUNDAGE TRADITIONS

Please send me free literature on Brundage Blower-Filter Package Units and Series "X" Blower Assemblies.

Name .....
Company .....
Address .....
City ..... State .....

Brundage COMPANY

Blower Specialists Since 1919
515 N. Park St.
Kalamazoo 11, Mich.

In 1922, oil imports were nearly double our exports. Tankers were being built to carry Mexican oil to California. By the time they were completed, in 1923, California had become the leading oil-producing state and the tankers carried California oil to the East. We did not again become a net importer of oil until 1948.

In 1922, Senator LaFollette was conducting his Congressional investigation of oil prices. He predicted, as I remember, that gasoline would sell for a dollar a gallon. I sat in on most of the hearings. By the time his inquiry was concluded, the big deposits had been found at Signal Hill and prices moved down. Oil usually has been that way. Figure things one way and they turn out the opposite. Build tankers to carry oil to California and actually use them to carry oil away from California. Hold a hearing to investigate high oil prices and end up by trying to figure out what caused them to drop. If you were a member of the investigating committee, you might think that the inquiry itself contributed to the price drop, but only if you were a member.

About this time in 1922, I was en route to Alaska. I spent most of the summer there. I guess I am one of the few who saw the Katalla oil field in operation. I was working then on plans for the Economics Branch of the Bureau of Mines, finally established in 1925. That led to my starting the Survey of Fuel Oil Distribution, which recently celebrated its silver anniversary. That would never have been started without the aid of the American Petroleum Institute and the support of Dave Folsom and Bill Farish.

My best wishes to you on the occasion of the 30th birthday of your fine magazine.

E. B. SWANSON, *Deputy director*

❖

OIL INDUSTRY INFORMATION COMMITTEE
New York, N. Y.

Editor:

My pertinent memories don't go back 30 years, but it sure seems like more than that. And I don't feel out of place; my first job out of college was on FUELOIL JOURNAL. Like all my fellow FUELOIL JOURNAL alumni, for whom I'm sure I speak, those were days we'll never, never forget.

Aside from those of you who are still with the magazine (God rest your souls) Dex Goldthorp and I are the only ones still in the oil business. Personally, I wouldn't trade it for any business in the world.

Yet in those days there was a lot of question whether we were in the oil business or not. Our biggest complaint was that the "majors" did not recognize heating oil as a legitimate, profit-producing part of their activities.

We used to tell our story to anyone who would listen. In many large companies, the side-tracked salesman who was responsible for getting rid of that stuff would agree with us, but say, "What can I do?"

Esmay

With more than 5½ million oilburners, and heaven knows how many space heaters, etc., now in use, things have changed radically. But the independent pioneers have, for the most part kept the advantage they earned then, and they still deliver most of the heating oil.

The one fact which stands out high in my memory was our "integrity." No one could intimidate us. We went ahead regardless of consequences. I'm sure that that Don Quixote attitude led us to tilt against a lot of very inoffensive windmills. But, you're only young once—and we were pretty young. Besides, it's often good business.

With a heritage like that—double-barreled from both your parents—you can't help but feel an obligation to tell all of us what's good for us, and even particularly when we may have to wince a little.

Anyway, congratulations. You are still very young. There are going to be lots more oilburners—and lots more issues of FUELOIL & OIL HEAT.

EDWIN W. ESMAY
Acting Executive Director

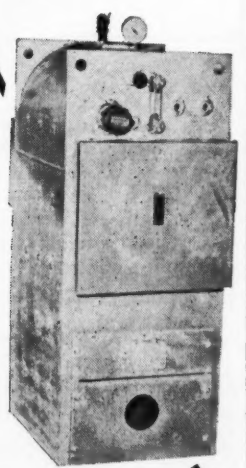
NEW YORKER
FIRE TUBE STEEL BOILERS

VERTICAL SERIES

Here's the ideal low-cost boiler for your heating requirements. Quiet, non-pulsating operation. Large instantaneous coil provides abundant hot water. Specially engineered integral combustion chamber. Easy-to-clean New Yorker vertical boilers are available with ASME stamp.

HORIZONTAL SERIES

This New Yorker Steel Heating Unit provides highest combustion efficiency. Oversize tankless coils provide year-round hot water. Each fire tube has spiral turbulator baffle. Big door offers easy access for cleaning. Integral combustion chamber resists temperature up to 3200° F—large combustion space.



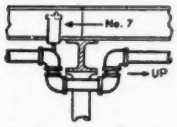
WRITE NOW FOR DETAILS

NEW YORKER STEEL BOILER CO. INC.
Colmar, Pa. • Lexington 784 or 838

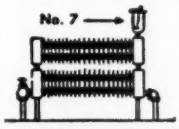
Automatic Air Vent

No. 7 AUTO-VENT

for . . .



Venting trapped mains and circulating lines



Venting convector radiators

Venting high points on mains

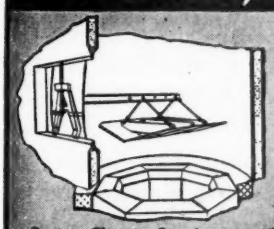
The favorite large capacity air vent for hot water heating systems. Self-closing, float-operated valve gives positive action for continuous venting. For pressures up to 75 lbs. Non-ferrous metals. No air chamber required. Size 4⅜"x2¼" with ⅛" I.P. female connection.

MAID-O'-MIST INC.

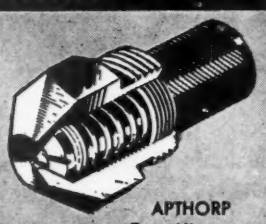
AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

3221 N. Pulaski Rd. CHICAGO 41, ILL.

FOR Quality INSTALLATIONS



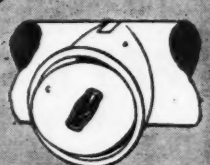
Boston Chrome Steel "HANG-DOWN" BAFFLE



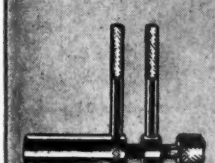
APTHORP True Alignment OIL BURNER NOZZLE

BOSMACO

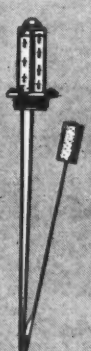
Instant-Glo COMBUSTION CHAMBER



The Boston Standard DRAFT CONTROL



Ideal NOZZLE EXTRACTOR



Clearview OIL TANK GAUGE

BOSMACO Apthorp NOZZLE KIT

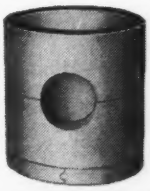
WRITE FOR COMPLETE INFORMATION

BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division Manufacturers, Lynn, Mass.

FOLLOW THE PATHWAY TO PROFITS *with*

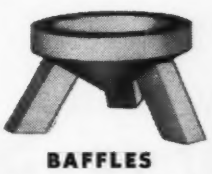
WALSH REFRACTORIES FOR THE DOMESTIC HEATING INDUSTRY



COMBUSTION CHAMBERS

Walsh-Made PeTeCo Precast Interlocking Combustion Chambers assure complete burning of oil . . . full efficiency.

Greater profits on each installation . . . bigger fuel savings for your customers . . . are the extras you get in Walsh products for the domestic heating industry. On every count . . . from unexcelled manufacturing facilities to long experience, careful selection of raw materials and modern production methods, Walsh-made products assure you and your customers of unvarying high quality and dependability.



BAFFLES

Tripod type precast baffles with burnt refractory legs. Saves fuel. Reduces stock temperatures.

WALSH H & B CASTABLE

Money, time and labor saving "mix-and-pour" refractory. In 50 lb. and 100 lb. moisture-proof bags.

WALSH PRODUCTS INCLUDE:

Fire Brick • Furnace Liners • Burnt Combustion Chamber Tile Plastic Furnace Lining • Castables • Airsetting Cements Asbestos Furnace Cement • Insulating Fire Brick and Cement Insulating Cement Fill

WALSH REFRACTORIES CORPORATION

101 Ferry Street • St. Louis 7, Missouri

FACTORIES: ST. LOUIS, MO. AND VANDALIA, MO.

WALSH REFRACTORIES CORPORATION
ST. LOUIS, MISSOURI, U.S.A.
MANUFACTURERS OF HIGH GRADE REFRACTORIES

1922 Oilheating

(*Begins on page 43*)

burner; a home made contrivance costing fifteen or twenty cents, that is as crude and inept as it is inexpensive.

"Modern fueloil burners are the product of years of painstaking experimental work. To design and install oil-burning equipment is a formidable engineering problem. In all candor, it is a problem which in more than one case has proved a stumbling block to the engineer.

"The so-called cheapness of home-made burners suggests the story, told elsewhere in this number, of the farmer who burned his uninsured home to the ground while soldering together flattened tomato cans to make a bath tub. Later he learned the price of a porcelain tub was less than the home-made tub would have been, if completed.

"Considering current fueloil prices, 'tomato' oilburners are dear at 20¢."

H. A. Tedman of Winslow Boiler & Engineering Co., writing in that issue, finds that since the boilers in homes were all designed for some form of solid fuel the engineer has difficulty in producing high efficiency, or at least he believes that results will vary with every heating plant. An illustration in his article shows how to conceal the storage tank for the home burner. It's located at the rear corner of the house, above ground, and appears to be about 2,000 gallon capacity with a conical top like a farmer's grain bin. Around it is an ornamental lattice and the caption explains that at some homes vines cover the lattice work.

Sharing the suspicion that industry members sometimes had toward oil companies, Shaw Publishing Co., in a house ad, offers for one dollar a water detector so you can measure the water in the bottom of the tank cars you buy.

In another house ad in the same issue, the magazine sets out some moral standards to keep its advertisers on the straight and narrow. This is the text:

"DON'T ADVERTISE UNLESS you are absolutely on the level with your customers; unless your goods are so excellent that everyone who buys them once will want them again; unless there is real need for what you make; unless you appreciate that it takes a long time and costs a lot of money to educate one hundred million people to associate your trade mark with a definite standard of quality; unless your business is built on the firm foundation of economical production and sound finance."

Magazine advertising departments of today may blush over this, or if they're cynical they'll probably point out the last two words, "sound finance," as indicating that the publisher wanted to get paid for his space.

A September 1922 issue item shows that Metropolitan Life, with the world's second highest building, now heats with oil, and so does Columbia University and Wanamaker's. Robert Adamson, president of Petro and former New York fire commissioner, handled the Metropolitan installation.

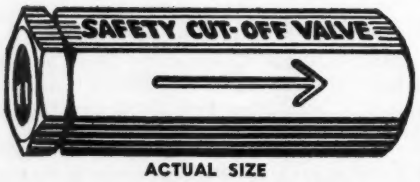
W. Frederick Suender in this issue tackles "The Economic Factors in fueloil Prices" and he tells 'em straight. Typical sentences are:

"The economic basis covering the price at which it is possible to exchange fueloil for money is no doubt a fairly complicated problem; consequently the American refiner does not take time to understand it" . . . "I have before me the Christmas and New Year greetings and predictions of the so-called leaders of the oil industry: they are all optimistic, based upon nothing more tangible than the turning of a calendar. For myself, I am yet to be convinced that there is any difference between, say, the evening of August 31st and December 31st and the subsequent day. To put the matter bluntly, the industry seems constantly wrong in its judgment" . . . "The refiner is in the same position as the old-time whaler, when the products of petroleum developed a new lubricant to take the place of whale oil; it was futile for the whaler to cite the cost of crews and ships; his cost did not govern, and the perfection attained in the manufacture of lubricants would have compelled whales to jump out of the sea into ships for the whaler to compete."

In other words, Mr. Suender wanted the refiners to price their fueloil to compete with coal or their optimistic predictions would flop; pricing on crude cost was illogical to him, but we must say that, right or wrong, he could

THE QUICKEST WAY TO STOP AFTER DRIP

....The HARVEY SAFETY CUT-OFF VALVE



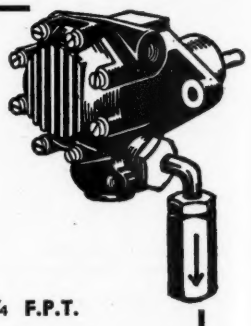
ACTUAL SIZE

INSTALL THE HARVEY SAFETY CUT-OFF VALVE ANYWHERE in the nozzle line, in a matter of minutes, and your after drip problems are licked.

You don't need to change the nozzle adaptor and there is no danger of interfering with the ignition. The Harvey Safety Cut-off Valve requires no wiring or electrical connection and works equally well in any position. The double quick shut off improves the operation of any pressure atomizing oil burner.

Install one on every job.

HARVEY SAFETY CUT-OFF VALVE



⅛ OR ¼ F.P.T.

Write for prices

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Sid Harvey stores in Boston: Bridgeport, Mt. Vernon, Hempstead, Valley Stream, Jamaica, Union City, New Brunswick, Newark, N. Philadelphia, W. Philadelphia, York, Baltimore, Washington, Arlington and Norfolk.

for EASY INSTALLATION
QUIET OPERATION

LOVEJOY

Type UX Double Flex FLEXIBLE COUPLING

Quickly and easily installed in dark or close quarters, Lovejoy Flexible Couplings can't fall off when blower or pump units are serviced. Rubber center unit increases flexibility and eliminates noise. Positive correction for misalignment, shock, vibration, backlash. Most fan manufacturers supply blowers with Lovejoy jaws on blower hubs at no extra cost.

Write today for complete Lovejoy Catalog

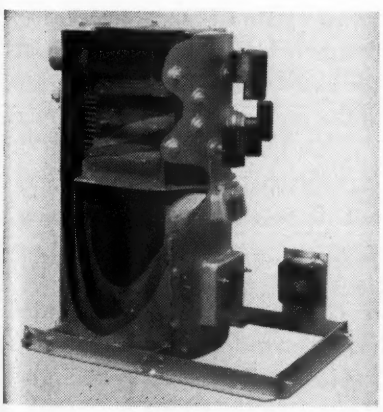
LOVEJOY FLEXIBLE COUPLING CO.

5012 W. Lake St. Chicago 44, Ill.

Also mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions.

Weatherall

BOILER-BURNER UNIT



COMPACT

Jacketed in an attractive housing, extended to cover the burner. The complete unit presents a neat compact appearance. The entire front panel is quickly removed for burner servicing on all models.

ECONOMICAL

Maximum operating efficiencies are assured by the balanced design of the boiler and oil burner. No wasted heat up the chimney.

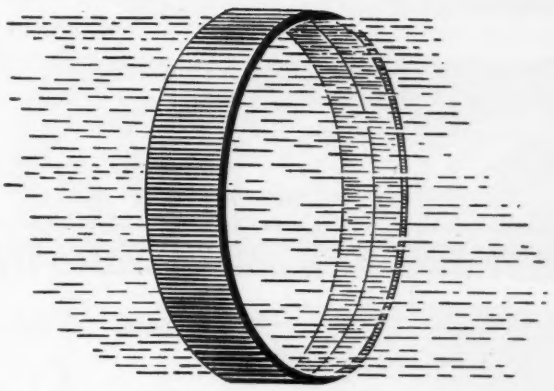
COMPLETE

The Weatherall Steel Boiler comes to you fully equipped—no extras to buy. A famous oil burner—a famous steel boiler—complete water heating facilities, all in one attractive unit.

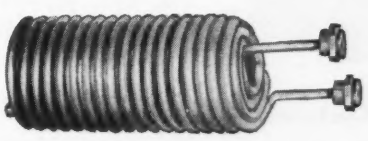
Weatherall Engineers, Inc.

387 Charles St. Providence 4, R. I.

what's this?



You're right—it's the nine-inch top nipple for the Utica Series '1' Wet Base Boiler, which provides the ideal location for a full-size tankless heater in the boiler's hottest water with positive circulation from every section. This is only one of the many fine features that make this boiler outstanding—the quality boiler of the heating industry.



Spiral Coil Type Heater for water boilers only.

Straight Tube Type Heater below water line for steam or water boilers.

UTICA RADIATOR CORPORATION

UTICA 2, NEW YORK

use the English language.

The Fueloil Markets page that issue also had opinions on price with this quotation, "One set of oil men are very enthusiastic regarding prices for fuel-oil. They have made assertions that the prices would be much higher later in the winter, and if they have not killed the golden-egg-laying goose, they have given some birds a scare."

Those were days when owners were supposed to know something about their burners, as this paragraph from J. G. Squires indicates:

"If you are dissatisfied, or have thrown out oil because of trouble, you have yourselves to blame—no one else. Did you, when you bought your oil equipment, insist on knowing how it operated, why it operated, what could go wrong with it—for anyone should know that nothing on earth is trouble-proof (eager salesmen to the contrary notwithstanding), what you had to do in an emergency, what kind of oil the sales company would advise using for guaranteed satisfaction; in other words, did you insist that whoever would have the care of the installation should be as fully informed on the function of the heating plant, as you would were you learning to drive a car? After the job was installed and your instructors had gone, did you for a week or so go down for a little while and watch and try to understand something about the new helper, instead of crying for the service man."

Early advertising of oilheating companies is interesting to check. In the very first issue appeared only one domestic oilburner advertisement by a company still active in the business 30 years later. That was Oil-O-Matic.

Industrial burners advertised then and still being sold were Tate-Jones and Simplex. The next month National Airoil came in with the industrials and two more present day domestic burner leaders showed up, ABC and Kleen Heet, followed the next month by Petro and Viking Pump. A number of other companies showed up in text columns that first year and became advertisers the next year, like Breese Engineering Co. and Minneapolis Heat Regulator Co. An accompanying table mentions all of the advertisers of the first year.

Anniversary issues are good sport if they don't come often. We celebrated our 15th in 1937 and now the 30th. Most of the time we prefer to look forward, to try and help the industry and ourselves make more profits this year and next, not last year.

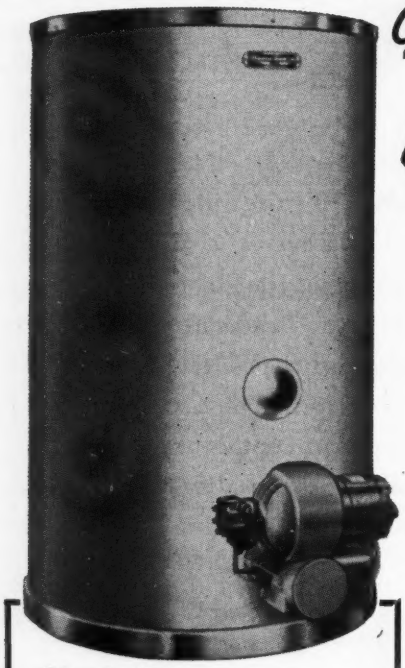
But there is a flavor, a flair of youth to the early day issues, as they battled with the problems that seemed so serious at the time.

It is fortunate that people can't see ahead. If those pioneers had known that 30 years later there would be six million oilburners in American homes, that sales would be seven hundred thousand a year, that mechanically the burners would be almost foolproof, that oil would be selling for less than coal in two-thirds of the nation, what would have been their attitude? Probably that there was little point in getting ulcers over something that was going to turn out so well anyway.

But of course if they had taken that easy course, the thing wouldn't have happened, so as an industry we owe them more than we will ever pay.

SHEPHARD BOILERS & HOT WATER HEATERS

Give You...



PROVEN PERFORMANCE PLUS . . .

INSTALLATION PROFITS

Here is your answer to the small home market . . . The SHEPHARD Boilers and Hot Water Heaters incorporate the *Percolating Action* that gives continuous efficiency and economy. This action prevents the deposit of lime, scale and sediment on heating surfaces. When you sell and install SHEPHARD Units you offer your customers . . .

Check the many SHEPHARD Features:

- ASME Code Construction
- Removable Screw Type Fittings
- Heavy Boiler Plate Construction
- Two Inch Rock Wool Insulation to eliminate Stand By Loss
- Hydrostatic Tested—300 lbs.
- All Copper Coil Tankless Heater for Domestic Hot Water
- Six Different Sizes
- Standard Size Fittings

● CONVENIENCE

The convenience of having plenty of hot water; winter or summer. That's a real blessing to any family and a good sales point.

● COMFORT

Thermostatically controlled, the SHEPHARD *Percolating Action* will keep your Customers' Homes "as snug as a bug in a rug." Add to this the important feature of . . .

● ECONOMY

All this comfort and convenience is your customers for a small initial cost while the *Percolating Action* of SHEPHARD Units show economies of 35% to 85% in fuel. All these advantages add up to SALES and MORE INSTALLATION PROFITS FOR YOU.

Wire or Write Today — *You can qualify as an exclusive dealer or jobber in your territory. Send for full information and prices.*

SHEPHARD Percolating Action

Shephard HEATER CO. INC.

951 SYCAMORE AVE., TERRE HAUTE, IND.

For that EXTRA PLUS *.. Galongage*

To meet today's competition you need something more than just "Good enough." You need the plus values of top performance and established consumer acceptance. Galongage is designed to do just that — to satisfy the most exacting requirements and do credit to the finest installation.

So when installing or checking, make it Galongage for greater efficiency and customer satisfaction.

International

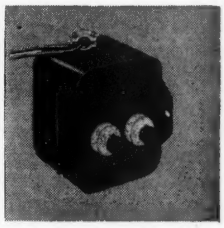
Highest grade lever arm type gauge to team with

GALONGAGE

- Flexible float arm
- Rugged and durable
- Extra large numbers calibrated in eighths
- Assembled oil-tight at the factory.

GALONGAGE is the only oil tank gauge generally used that measures in gallons. Comes fully assembled to save installation charges. Calibrated for each standard size 275-250 and 220-gallon tank with depths of 44″, 42″, 27″ and 26″, with 1½″ or 2″ tank openings.

APPLIED MECHANICS COMPANY
167 OLIVER STREET, BOSTON 10, MASSACHUSETTS



always specify **UNIQUE IGNITION TRANSFORMERS** *for dependable performance!*

(UL)

UNIQUE ART MFG. CO., INC.
Makers of Quality Products Since 1910
200 WAVERLY AVENUE,
NEWARK 8, N. J.

Use Horizontally, Vertically — Any Angle!!!

GET ALL 3 FEATURES FOR THE PRICE OF ONE

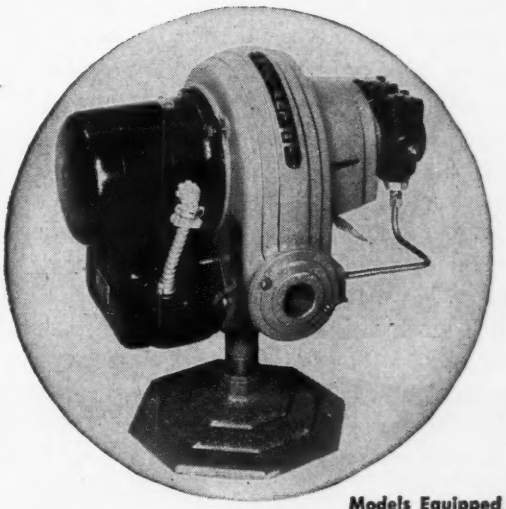
We guarantee that if your line is tight below the valve, the Hold-Tite Combination Check, Anti-Hum, Anti-Syphon Valve will not leak under any condition of service—vibration included.

Mfgr. agents territories open—write only.

HOLD-TITE VALVE MFG. CO.
MANUFACTURERS OF QUALITY VALVES & SPECIALTIES
735 LEXINGTON AVE. • NEW YORK 22, N. Y.

SELL MORE OIL BURNERS . . . CUT SERVICING COSTS

Radiant
THE SERVICEMAN'S BURNER



Models Equipped with Shell Designed Combustion Head.

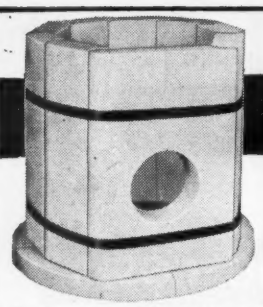
INCREASE SALES & UNIT PROFIT

Radiant performance is equal to the highest price burner — yet Radiant burners are priced to meet competition.

PLUS
- Low Upkeep
- Factory Guarantee
- National Distribution in Protected Territories
- Easy Installation with Minimum Servicing

Write for The Biggest Oil Burner Sales Story Today!

RADIANT UTILITIES CORP.
8815 18th Ave., Brooklyn 14, N. Y.



FOR SATISFIED CUSTOMERS — INSTALL . . .

AMERICAN COMBUSTION CHAMBERS

100% "KILN-CURED" LIGHTWEIGHT REFRACTORIES

Equipment manufacturers are invited to bring their special design problems to us.

HIGH QUALITY

American Chambers are made from the finest, high grade refractory materials combined with proper "Kiln-curing". They will withstand 2500 degree temperatures and will not crumble in water.

EASY INSTALLATION

Controlled manufacturing and careful design of American Chambers makes for fast and easy installation. The flexible pieces fit together with a minimum of effort.

TOP PERFORMANCE

Because of the high quality of materials used in American Chambers they provide faster heat-ups, quieter burner operation and savings in fuel.

JOBBERS: Write today for price sheet.

AMERICAN CLAY FORMING CO.

TIFFIN, OHIO

. . . *Remember Early Burners*

(*Begins on page 54*)

be the best fuel for him.

Low-pressure, gun-type burners, which since have proved to be well able to survive, gained early popularity through the pioneering efforts of such companies as C. U. Williams & Son, which produced the first Williams Oil-O-Matic burners. Indicative of the sound design principles behind the Oil-O-Matic burner of the early 1920's, which is a classic today, its motor drove a forced-draft blower, a pump to draw oil from an outside tank, a positive-displacement metering pump which was adjusted in a continuously-variable fashion to adjust the firing rate, and a low-pressure atomizing pump to provide compressed air.

The low-pressure, gun-type burner was of relatively great importance in the early years of domestic oilburners. Hart, Nu-Way, Sundstrand Engineering Company and several other manufacturers made burners that used compressed air for atomization. Caloroil won early fame through developing and manufacturing a line of burners that used compressed air in a manner greatly different than that used in the gun-type burners.

The oil heating industry got itself started, then, with help from the performance of a wide variety of burners including these which have been mentioned: 1. vaporizing, pot-type burners; 2. atomizing vertical rotaries; 3. wall flame rotaries; 4. horizontal rotary cup burners; and 5. low-pressure, gun-type burners.

Then there is the pressure burner, in a class by itself because of the enormous influence it has had on the American public in its role as by far the most popular type of domestic oilburner. Characterized through its use of a pump that developed about 100 lbs. pressure for use on an atomizing nozzle, the pressure burner was offered by relatively few manufacturers prior to about 1927. The typical pressure burner made before 1930 had a belt-driven oil pump, a separate suction line strainer, and separate pressure regulator valve and shut-off valve. These two valves often housed, however, in one casting. Electrol was the exception among pressure burners in having, even in the early 1920's, a typical gun-type, pressure burner with an oil pump (designed and manufactured by Electrol, as were almost all the parts on the burner) that was driven directly by the motor shaft. By 1926, great numbers of the classic Model T Electrol were in use. This burner had oil-handling and air-handling parts almost identical to those of 1952 burners and produced a flame difficult to excel today.

The early belt-drive pressure burners of several manufacturers were making oilburner history in the late 1920's. Gradually the fashion shifted to the use of direct-driven oil pumps, eliminating the belt drives. From the start, the pressure burner had the edge over most other types of burn-

FLAME-MASTER

A new better and cheaper Low-Pressure Oilburner with twenty-two less parts.

Easy to Install, Attractively Priced.
Extra large orifice guarantees trouble-free nozzle operation.
Lifts fuel from buried tanks.
Complete atomization at low-pressures.
High CO_2 ratings.
Many other Patented features.
Simple service requirements.

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20 year guarantee on NOZZLE

Exclusive dealer and distributor franchises now available.

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Mfgrs. of High and Low Pressure Oil Burners

ODOR-GO

Eliminates Fueloil Odors and Stains Due to Spills

Efficient and Economical to Use

ALSO:

SOOT-GO for Cleaning Oil and Gas-fired Heating Plants

SLUDGE-GO for Cleaning Fuel Oil Tanks and Will Emulsify Water.

EZ-E WELD for Sealing Leaky Boilers. No After Odor. No Draining.

RUST-GO for Cleaning Sick Boilers. No Draining Necessary. WRITE FOR NAME OF NEAREST JOBBER

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Use "CRESCENT PARTS" Service

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Authorized Fuel Unit Service Station

"FACTORY REBUILT" Repair Exchange control service on all popular makes at regular manufacturers list prices and trade discounts.

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SEND US YOUR ORDERS OR INQUIRIES

CRESCENT PARTS AND EQUIPMENT CO., INC.

825-831 S. Boyle Avenue St. Louis, Missouri

ers in several important respects. It was highly adaptable to spark ignition. It provided forced-draft and by its nature applied the air advantageously to the flame. It could be quiet in operation. Its parts, particularly its air-handling and oil-handling parts, were far from the flame and thus there was little or no deterioration caused by flame heat and no troublesome carbon-forming and coking of oil-handling parts. Topping off these inherent advantages, the pressure burner could use the heaviest, cheapest domestic fueloils usually available in different localities, and thus it had an important edge over the less fortunate types of burners which, perhaps because they vaporized the oil instead of atomizing it, could use only the light, expensive oils available for house heating.

A milestone in the history of oilburners and particularly pressure burners was the appearance of the first fuel unit. The Webster fuel unit simplified burner design, manufacturing, and service work tremendously. After the use of fuel units on pressure burners became standard practice, dozens and dozens of manufacturers switched to making pressure burners instead of or in addition to the types of burners which had been their earlier favorites; it became easy and inexpensive to design and manufacture a pressure burner.

The all-important parts played by burner controls, draft regulators, combustion chamber materials, heating specialties, and summer-winter hot water hook-ups have not been mentioned in this article, because the article has been confined to the advancements in burners themselves.

Combustion testing instruments, in their effect on flame efficiency and thus on fuel bills, did play a direct role in assisting the lowly oilburner of the 1920's and 1930's, for the use of instruments led straight to a better understanding of the combustion process for burner dealers and service men. Those dealers who in the early days used the classic instruments manufactured by the Hays Corporation produced outstanding combustion in many cases. The draft gage, stack thermometer, and flue gas analyzer changed oilburner history and made it far better and greater than it would have been otherwise.

Turning an empty house into a home depends on the arrival of the family, the moving fan, and the fuel-oil truck. That's because of the operation of oilburners. The next time you see an oilburner in somebody's basement, study it very closely; you will be looking at the thing that in the past 30 years made a terrific improvement in the lives of millions.

GIVE YOUR CUSTOMERS THE BEST

NEW SPARKLER FUEL OIL FILTER

with the rayon filtering element traps all storage tank dirt, rust and moisture that could possibly plug the fine nozzle parts. Makes a smooth operating burner and cuts emergency service calls.
Install a Sparkler Filter along with summer servicing of burners and make a sweet extra profit on the same call.

FREE to all oil burner dealers—postcards for soliciting summer service business. Write for sample and particulars.

FOUR FILTER SIZES AVAILABLE

	For average annual oil consumption of	Recommended for
OB-2	2000 gals.	Average home burner.
OB-4	4000 gals.	Apartment building and light industrial.
OB-8	8000 gals.	Heavy industrial.
SH-3	1000 gals.	Space heaters and other small burners.

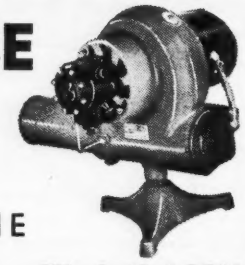
Refill discs are conveniently packed 12 to a package.
The same discs are used on all OB models.

SPARKLER MANUFACTURING CO. MUNDELEIN, ILL.
Makers of fine filtering equipment for industrial use for over a quarter of a century

SILENT KORTH OIL HEAT

REDUCED PRICE

SAME QUALITY



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Soot Destroyer

(For fuel oil soot only.) Keep a supply on every Service Truck. Sell cleaning jobs. Use *E-Z*. One application does a thorough soot cleaning job. Saves time. Pays extra profit. Sell one-lb. cans to customers. If your Distributor cannot supply you, order direct.

No. 1 Pkg. approx. 1 lb. . . . List $1.00 ea.
No. 5 Pkg. approx. 5 lbs. . . List $4.50 ea.

Special discount to Distributors on quantities.

HEALY-RUFF COMPANY

797 Hampden Avenue • St. Paul 4, Minnesota

Know your Costs

(*Begins on page* 64)

livery costs would certainly startle a distributor, in respect to the wholly unnecessary and unsound practice of rendering "fire department service" to the user who refuses to cooperate with the principle of deliveries automatically scheduled and effected.

For some reason not yet satisfactorily explained, so many distributors break up their delivery schedules and let cooperative customers wait, while they chase pell-mell, hell-bent, all over the city or countryside to deliver 100 gallons P.D.Q. to some chronic C.O.D. buyer, who usually has a few sick children or an eighty-five-year-old uncle expiring from the cold. The industry has seemingly never recovered from some of the "old tricks" by short-sighted, improvident people who "got away with murder" during the war-time period of rationing.

How wonderful it could be for the industry to figuratively wake up some fine morning to learn that all the ignorant, grovelling distributors who can't sell any other way than by ridiculous price cutting have finally seen the light, or else abandoned oil to plague some other industry.

The term "ignorant" is used advisedly, for to know one's costs is to know that price cutting probably won't even leave enough revenue to pay the receiver's fee in bankruptcy, to say nothing of the creditors.

On the other hand, maybe we need a few of these cuckoo birds around to challenge our ability to keep on our toes and continue to do a he-man job of constructive selling.

Notwithstanding some of the extremes of the past few years—as exemplified by some shortsighted employees' wanting to do less work, but receive more and more compensation for doing less—there can be developed a ray of sunshine and hope.

One of the best antidotes for the correction of many slow-down evils, existing not only in the oil industry but in many others, is going to be a reversal of attitude by labor — and don't we all perform labor?

One of the most salient remedies would be that of the employee's recognizing the necessity of doing more instead of less for the more payroll dollars he receives—for if he doesn't, the law of compensation will take its inevitable toll.

It has been appalling to observe the relative dearth of soundly conceived incentive plans for the compensation of employees, to the end that proper recognition can be given to the employee's increased cost of living, but without completely wrecking the business enterprise from which he receives his livelihood.

Too often management has been reluctant to place the cards frankly on the table in an earnest appeal to the employee to cooperate, in respect to exerting his best efforts to keep the company healthy and strong in a financial way through higher productivity. It should not be too difficult to secure the employee's hearty cooperation not only in respect to productivity, but also in respect to minimizing any and all operating wastes of which he may have knowledge.

Consider well the possible adoption of an incentive plan, soundly con-

GORTON VALVES

THE SURE CURE FOR COLD RADIATORS

FAST VENTING

Write to-day for literature and prices

GORTON HEATING CORP.

Since 1887—Manufacturers of Heating Equipment

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NO HEAT LOSS!

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HEAT-LOCK

NON BAROMETRIC CONTROL

Prevents chimney from robbing cellar and house of air, which is great heat loss in any structure where an opening permits chimney to vacuumize house. Also the Heat-Lock enables burner to operate with minimum draft, allowing reduced air to give efficient combustion. The Heat-Lock keeps hot gases in unit for up to 3 times longer—saves its price over and over again year after year. For franchised details and free information write today.

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EVERYTHING FOR THE HEATING
And OIL BURNER TRADE
FREE! Write for Webber's 1951-1952 Catalog.
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SELL FILTERED FUEL OIL
Micronic Filtration Without Expensive Alteration to Your Tank Truck!
Look at the advantages in customer sales appeal along with savings in maintenance costs:
- Increases customer satisfaction.
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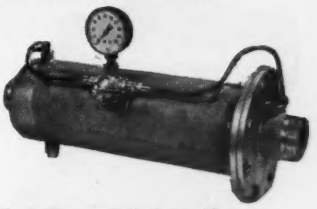

Write For Details and Prices Now!
COOTE
CHAS. W. M. COOTE CO., INC.
336 Gregory Ave., West Orange, N. J.

ceived and carefully safeguarded for the benefit of the company and the employee alike. Properly designed and applied, it is certain to contribute much happiness to all directly concerned and show greater productivity for the dollar spent.

It is perfectly obvious that selling costs can easily wreck a business. Too frequently salesmen — all wonderful fellows, personable, loyal, etc. — are lacking in the ability to plan their work. Too often management is prone to overemphasize the theory of having salesmen contact the customers every so often, lest they lose the business. Both lines of thought are entirely fallacious in principle, because the margins simply do not permit such excesses.

Without question, some personal contact must be maintained from time to time with certain present customers; but in the main the salesman must be employed if at all possible on the basis of creating new business, to make his work fully self-sustaining (including reasonable supervision) and showing a profit through the sale of fuel oil and/or equipment and burner service.

Know your costs in respect to advertising. Be certain that you are in a position to trace results and know what form is most productive and profitable. Amateurish blah-blah is usually expensive, at best. "Reason-why" copy and media commensurate in cost with results are the only forms which may rightfully be considered.

Know your costs when it comes to a misfit salesman. Unless productive, as measured by results, he is a luxury which a nominal margin cannot support. A poor salesman is only taking up the room and time which should be occupied by someone who can produce at a profit.

Not enough stress has been placed on the very great importance of the careful selection of men, their training and supervision, and the measurement of results.

Saleswise, one of the oldest besetting sins of the oil industry, particularly in the major integrated companies, has been that of being "volume mad, profit blind." Trite and somewhat shopworn, but nevertheless all too true.

Knowing your costs means to sell wisely and well—high-pressure tactics have no place in the picture. An isolated account should not be considered, except in the most unusual cases.

Exerting a little more effort unfailingly, in every possible case, to sell a 550-gallon storage tank or larger will cut the subsequent delivery cost of fuel oil at least in half.

Following the principle of refusing to sell oil-burning equipment unless there is reasonable expectancy of profit from the future fuel oil sales is usually the safest policy to follow.

Although the selling procedures may have been streamlined to the final degree of efficiency, as measured by results and the maintenance of the lowest possible costs, it is of course obvious that the gains from sales could be easily dissipated by:

1. An inefficient delivery operation, as evidenced by low productivity factors, excessive overtime, "peaks and valleys" in volume, costly motor vehicle maintenance. Simplified records

HOW TO FIGURE HEAT LOSS EASILY
- B.t.u. heat loss per room.
- C.f.m. needed per room.
- Warm air heating, forced or gravity—pipe area, pipe and stack size.
- E. d. r. steam and hot water.
- Cost of heating per season.
- Blower size needed.
- Design based on 0° to 70°—correction factors 40° below to 40° above.

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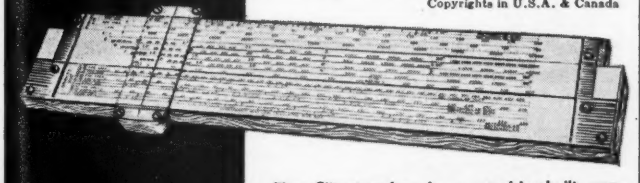

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The Climatemaker is a precision-built non-logarithmic slide rule used by contractors over 18 years. Saves time in planning residential heating systems. Book tells use in easy steps. Wall construction factors included. Send $15 cash, check or money order to Climatemaker, Dept. 408 Box 378, Bloomington, Ill. Clip this ad.

EUREKA! ("I Have Found It")
There are thousands of small business men who *have not found it,* because of fear of the unknown or false notions about receivables financing.
With a reputable company, interested in safety of principal rather than high charges, the small business man can deal with great advantage to himself. The extra money obtainable from receivables keeps his creditors happy and enables him to concentrate on enlarging profitable sales.
There is no obligation if you write for and read our booklet.
LEXINGTON CORPORATION
Fuel Financing from Maine to Maryland
M. S. LURIO, Pres.
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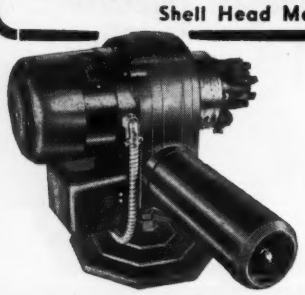
SINCE 1927
STANDARD AUTOMATIC OIL BURNERS
Shell Head Models Available



IT TAKES PERFORMANCE TO MAKE A REPUTATION.

Write for Territory open in your Locality

Models from ¾ gal. to 20 gal. per hr.

STANDARD ARCOIL CORP.
21-23 Broad Street Newark 4, N. J.

NEW...VECO 140-A
Complete
COMBUSTION TESTER

Get fast, accurate testing with Veco's advanced analyzer. One dial shows CO_2, stack temperature, draft. Electronic thermistor glass-sealed for constant calibration. New 140-A is compact, rugged, trouble-free. Easy to operate; thrifty to buy. Send today for literature.

Mfrs. of thermistors under Western Electric license

Victory
ENGINEERING CORPORATION
Springfield Road, Union, New Jersey

should be maintained, so that the executive in charge may know from day to day all of the vital productivity factors and have a very direct idea of the drivers' Payroll Cost Per Gallon.

2. Inadequate controls over purchasing equipment and supplies, as might result in duplications, excessive inventories, untimely buying, loss of merchandise, inefficient records or, on the other hand, entirely too much in the way of records.

3. Excessive paper-work procedures of office personnel, duplications of work, too much red tape for speedy, efficient handling, improperly designed forms, etc.

4. Inadequate credit controls—too rigid or entirely too lax, cumbersome routine, lack of courtesy in customer contact by phone or in correspondence.

Many distributors have been keen to recognize the value of sensibly designed, simplified budget plans, as a means of minimizing costs which otherwise have been resultant from the usual drawbacks of having 50% to 60% of the customers' fuel oil bills fall due in 25% of the calendar year.

5. Carelessly planned, poorly supervised installations of equipment—another way of inviting needless and costly service, excessive delivery costs and loss of customer good will.

With the foregoing retrospective analysis of the series under the caption, "Know Your Costs," the final measure of benefit for those who may have gained any inspiration in going to be in direct ratio to the thoroughness and continuity of effort which has been or will be exerted in pursuit of the determination to actually effect the prerogatives of good management, which will unfold from an enhanced knowledge of costs.

❖

Jess L. Moore has been appointed director of market research for the Coleman Co., Inc., Wichita, Kans. Moore joined the company in 1947 as district sales representative, later becoming regional sales supervisor. For the past two years he has been a special representative of the vice-president and national sales manager in Washington, D. C.

Oil and our Way of Life

(*Begins on page* 60)

and a half billion barrels of oil and associated liquids and nearly eight trillion cubic feet of gas, more than half of the energy the country used.

We live in a new world: a world in which men work 40 hours a week instead of 70; a world in which an hour's work is worth four times its value 100 years ago; a world in which brain has superseded brawn; a world in which the average workman is master of nine mechanical slaves; a world in which we own the sky, as well as land and sea; a world in which we live better than men have ever lived before.

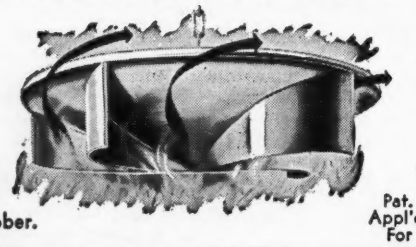
We live in a new world, because a little group of men were spurred by hope of profit; because they risked their money and their standing; because they drilled a well on a little stream called Oil Creek.

An obscure event, in an obscure place, brought about by obscure people. Yet that obscure event, part of a pattern of like events, has made more difference in how more people live than all the conquests in history.

DON'T JUST BAFFLE! GET SWIRLING ACTION TOO-

Every Conversion needs a FIRE-SWIRL BAFFLE.

Get the facts, clip this to your letterhead, or see your jobber.



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FIRE-SWIRL ZEH COMPANY INC., PASSAIC, N.J.

OIL HEATING SNAGS

This book gives the solutions to many of the Everyday Snags that annoy you in installation and service. We've been working on them for years. They are all simple and practical answers to the most common goat-getters on jobs. It's an 8½ x 11 inch book of 64 pages. ..... $1.

(*Please send remittance with order.*) $1.

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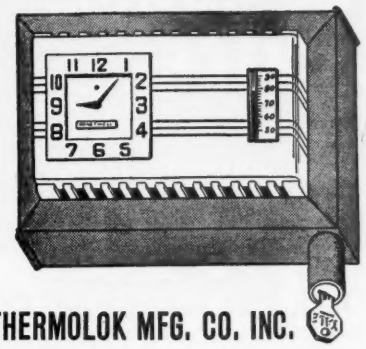
Seen the new THERMOLOK models?



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EASY TO INSTALL

- No nails or screws.
- No heat lock.
- No holes in wall.
- 15 seconds to install.

Models available for M-H, Penn, Perfex, Sampsel, Detroit Lubricator, and G.E. thermostats.
Write for name of your nearest jobber.

THERMOLOK MFG. CO. INC.

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RAJAH TERMINALS

FOR OIL BURNER SPARK PLUG IGNITION CONNECTIONS
Made in Two Styles
CRIMP TYPE and SOLDERLESS

Code No. C/T #11 Code No. S-SOS #11

THE RAJAH CO. BLOOMFIELD, NEW JERSEY

. . . *Oilheating Trends*

(*Begins on page* 14)

a great range on this from a low-point of 600 to a high of 10,000 but most of the companies were fairly close to the average.

Then the fueloil distributors were asked how many retail customers can be handled by one bookkeeper and the average here was 2,100 and the range was from 600 to 6,000.

The next question in this group inquired how many fueloil accounts can be kept in line by one salesman. The consensus on this was 1,350 and the range was from a low point of 400 to a high of 6,000.

The final question in the group asked how much daily output could be handled by one man at the bulk plant. The average on this from the reporting companies was 90,000 gallons, and the range was from a low point of 8,000 to a high of 500,000. Most of the companies on this question reported around 75,000 to 100,000.

WEIGHTED DEGREE DAYS: The Socony index of weighted degree days for the full 1951-52 heating season shows District I (East Coast) to be 8.0% warmer than normal. District II (Midwest) for the full season was 0.8% warmer than normal.

FUELOIL STOCKS: Stocks of No. 2 heating oils at refineries, terminals and in transit East of the Rockies on June 14 were 49,223,000 barrels compared with 51,056,000 last year, a drop of 3 per cent. This drop would not in itself be important were it not for the fact that we had a very mild winter and must expect a normal one next season and also we expect to have next season about 10% more oilburners in use. The loss of fueloil production in the strike was only about 2% of annual requirements. This in itself would be trivial were it not for the fact that it must be added to the other increased requirements. Assuming normal weather next season the East Coast will apparently need an increase in No. 2 fueloil around 19% and the Midwest around 10%.

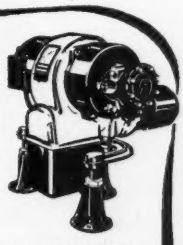
DEALER COMMENTS: Typical comments on various questions of the month are these . . . "Furnaces or boilers should be sold in such a way that they can be adapted to either oil or gas fuel" . . . "Oil installations in our city are off in favor of gas; people seem price conscious, choosing the lower cost equipment" . . . "Increase in price of No. 2 fueloil will take its toll of possible customers" (this is the first Eastern dealer that we have encountered making that statement—most of them feel that a price rise is desirable if it will eliminate recurring supply scares) . . . "Installations are starting to move; we should more than make up what we lost in the first 4 months" . . . "Lots of interest for all-year air-conditioning but no buyers."

❖

Joseph H. Cohen, previously with Sims Corp., has formed the Cohen Heating Supply Co., Providence 5, R. I., to deal in oilburner and wholesale heating supplies. An open house to celebrate the opening of his business was held.

Sundstrand All Electric
OIL BURNER

A complete line . . . with units for every oil-fired furnace or boiler. Nationally known.



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- All Surfaces Machined
- Variable Tube Lengths
- Completely Fire Tested
- Meets Local and State Requirements.

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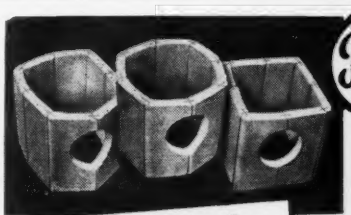

One Size Makes Any Shape Easy to Install

Write for Free Copy of "Better Combustion Chambers"

R&I **Combustion Chambers**

- Last Longer
- Heat Up Faster
- Cut Fuel Bills

Many thousands of these quality chambers are giving real customer satisfaction. Ask your supplier. Write for prices on these chambers and R & I refractory and insulating materials for better oil burner installations.

REFRACTORY & INSULATION CORP.
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McCORKLE
CONTROLS are designed to GIVE—not require SERVICE
for Vaporizing Oil Burners
Less service means greater customer satisfaction—increased profits—more new business
• Patented dual blade bi-metal assembly —insures trouble-free operation—supplies a wide margin of extra power.
• More rapid heat transmission.
• Adjustable snap acting Micro-switch.
• Heavier, more rugged construction.
D. H. McCORKLE CO.
Box E, Station A Berkeley, California

Photographic Book portrays people in the oil Industry

"THE OILMEN," a photographic book recently published, pictures completely and dramatically the petroleum business, making use of 174 pictures.

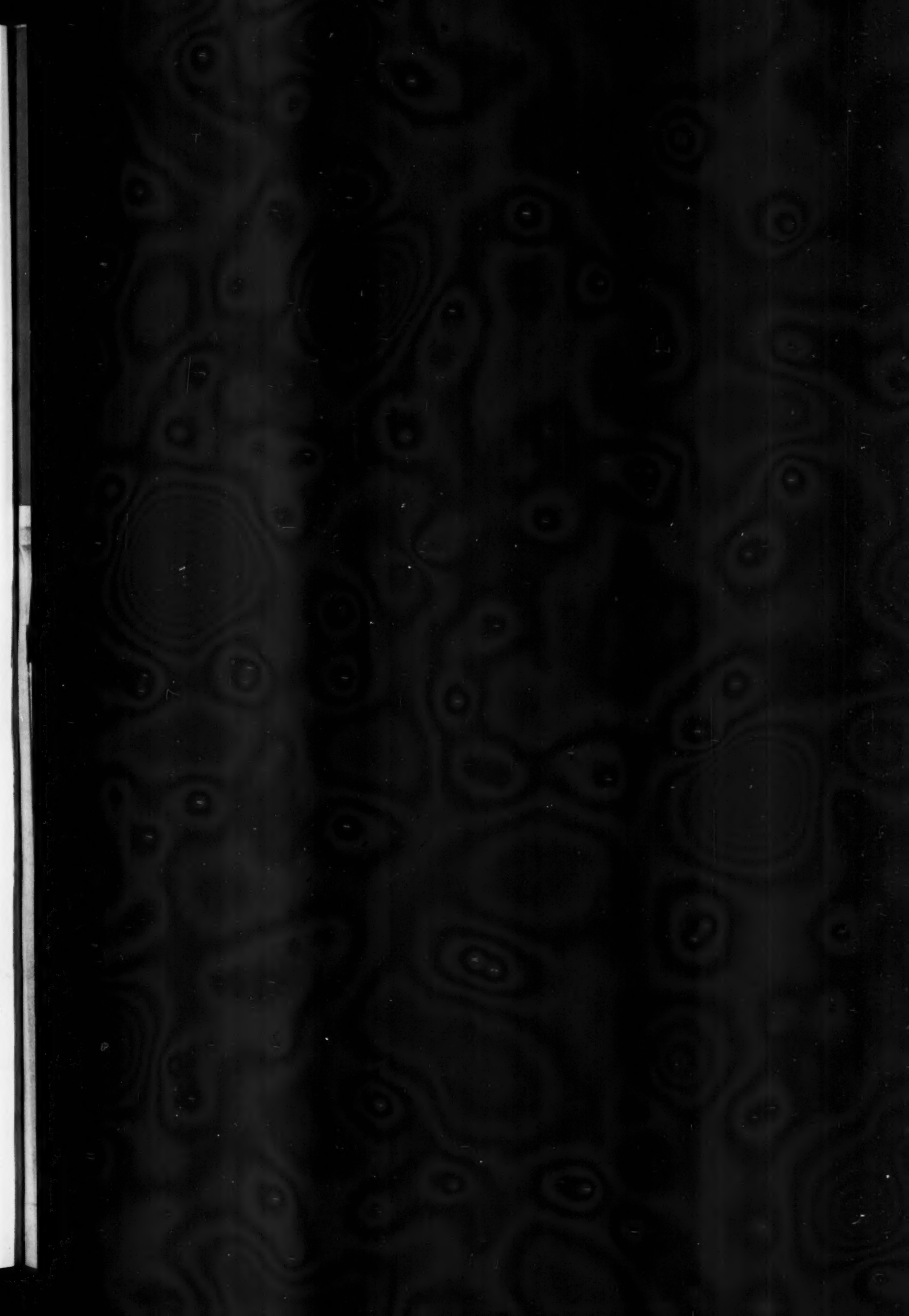
The pictures were taken by Thomas Hollyman, consulting photography editor of *Holiday* magazine, on assignment for the Shell Oil Co. Hollyman travelled from California to Connecticut, shooting pictures from a helicopter in a California valley, photographing drilling crews in Texas from the tops of derricks and seismic parties in Louisiana from a marsh buggy, along with many more conventional shots. The result was about 4,000 pictures from which Shell selected 174 key pictures and recognized a compact, exciting story of the industry. Rinehart & Co. saw the layout of a book made up of the pictures, liked it and undertook to publish it.

The book is non-commercial, does not mention Shell, and is divided into 10 sections, each beginning with a text block and a photograph of an oilman representing a main phase of the industry. The text leads into the story of the section and a running copyline carries the theme from page to page. Captions explain each picture.

The photographic collection runs the gamut from oil prospecting, drilling, building and operating pipelines, refineries and research laboratories, to pictures of men who deliver the finished products to the public.

"The Oilmen," 96 pages, 10¼" by 10½", cloth cover and dust jacket. Published by: Rinehart & Co., Inc., 232 Madison Ave., New York 16, N. Y. Price $1.50.

DEGREE DAY TABLES

ONE MONTH ONLY					SEASON TO DATE			
	May		Percent		(Sept. 1 to May 31)			Percent
Normal	1951	1952	Change*		Normal	1951	1952	Change*
221	220	320	+ 44.8	Albany	6587	6431	6746	+ 2.4
32	33	24	— 25.0	Atlanta	2999	3111	2690	— 10.3
99	74	77	— 22.2	Baltimore	4509	4134	3976	— 11.8
248	215	238	— 4.0	Boston	5853	5068	5420	— 7.4
351	246	339	— 3.4	Buffalo	6805	6348	6444	— 5.3
259	165	223	— 13.9	Chicago	6205	6163	6033	— 2.7
132	79	86	— 34.8	Cincinnati	4993	4772	4365	— 12.5
255	168	235	— 7.8	Cleveland	6094	5798	5582	— 8.4
14	5	14	..	Dallas	2378	2298	2042	— 14.1
271	218	232	— 14.4	Denver	5784	5383	5723	— 1.0
165	115	188	+ 13.9	Des Moines	6356	7158	6799	+ 6.9
252	192	235	— 6.7	Detroit	6502	6275	6242	— 4.0
263	171	235	— 10.6	Grand Rapids	6655	6342	6411	— 3.6
216	179	256	+ 18.5	Hartford	6037	5502	5777	— 4.3
409	394	368	— 10.0	Helena	7600	8321	8594	+ 13.0
12	11	0	..	Houston	1333	1163	1006	— 24.5
155	89	144	— 7.1	Indianapolis	5459	5567	5114	— 6.3
106	55	91	— 14.1	Kansas City	4971	5119	5056	+ 1.7
104	69	10	— 0.4	Los Angeles	1363	1124	1452	+ 6.5
92	65	74	— 19.5	Louisville	4421	4624	4195	— 5.1
340	240	333	— 2.0	Milwaukee	6955	7347	7166	+ 3.0
255	132	224	— 12.1	Minneapolis	7898	8406	8143	+ 3.1
1	0	0	..	New Orleans	1208	1226	933	— 22.7
176	121	176	..	New York	5270	4591	4671	— 11.3
152	94	138	— 9.2	Omaha	6074	6517	6552	+ 7.8
115	85	110	— 4.3	Philadelphia	4720	4366	4276	— 9.4
170	109	158	— 7.0	Pittsburgh	5427	5099	4832	— 10.9
375	347	400	+ 8.2	Portland, Me.	7128	6754	7236	+ 1.5
241	207	198	— 17.8	Portland, Ore.	4214	3919	4234	+ 0.4
245	189	220	— 10.2	Providence	5946	4938	5247	— 11.7
86	73	64	— 25.6	Roanoke, Va.	4114	4344	4066	— 1.1
88	55	85	— 3.4	St. Louis	4602	4975	4545	— 1.2
233	181	134	— 42.5	Salt Lake City	5568	5000	5803	+ 4.2
252	240	239	— 5.1	San Francisco	2569	2452	2826	+ 10.0
485	363	518	+ 6.8	Sault Ste. Marie	8901	8536	8817	— 0.9
304	244	259	— 14.8	Seattle	4560	4178	4345	— 4.7
226	180	226	..	Toledo	6202	6357	6147	— 0.8
104	68	76	— 26.9	Washington	4582	4079	3949	— 13.8

*Compared with normal.